Top of the Class

HIGH PERFORMERS IN SCIENCE IN PISA 2006



Programme for International Student Assessment

OECD

Top of the Class

HIGH PERFORMERS IN SCIENCE IN PISA 2006

Programme for **I**nternational **S**tudent **A**ssessment



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Foreword

The rapidly growing demand for highly skilled workers has led to a global competition for talent. While basic competencies are important for the absorption of new technologies, high-level skills are critical for the creation of new knowledge, technologies and innovation. For countries near the technology frontier, this implies that the share of highly educated workers in the labour force is an important determinant of economic growth and social development. There is also mounting evidence that individuals with high level skills generate relatively large externalities in knowledge creation and utilisation, compared to an "average" individual, which in turn suggests that investing in excellence may benefit all. Educating for excellence is thus an important policy goal.

When parents or policy-makers are asked to describe an excellent education, they often describe in fairly abstract terms the presence of a rich curriculum with highly qualified teachers, outstanding school resources and extensive educational opportunities. Nevertheless, excellent inputs to education provide no guarantee for excellent outcomes. To address this, OECD's Programme for International Student Assessment (PISA) has taken an innovative approach to examining educational excellence, by directly measuring the academic accomplishments and attitudes of students and to exploring how these relate to the characteristics of individual students, schools and education systems. This report presents the results. Its development was guided by three questions:

- Who are the students who meet the highest performance standards, using top performance as the criterion for educational excellence? What types of families and communities do these students come from?
- What are the characteristics of the schools that they are attending? What kinds of instructional experiences are provided to them in science? How often do they engage in science-related activities outside of school?
- What motivations drive them in their study of science? What are their attitudes towards science and what are their intentions regarding science careers?

The report shows that countries vary significantly in the proportion of students who demonstrate excellence in science performance. Interestingly, scientific excellence is only weakly related to average performance in countries, that is, while some countries show large proportions of both high and poor performers, other countries combine large proportions of 15-year-olds reaching high levels of scientific excellence with few students falling behind. Moreover, the talent pool of countries differs not just in its relative and absolute size, but also in its composition. Student characteristics such as gender, origin, language, or socio-economic status are related to top performance in science but none of these student characteristics impose an insurmountable barrier to excellence. It is particularly encouraging that in some education systems significant proportions of students with disadvantaged backgrounds achieve high levels of excellence, which suggests that there is no inevitable trade-off between excellence and equity in education. There are lessons to be learnt from these countries that may help improve excellence and equity in educational outcomes. The report shows that top performers in science tend to be dedicated and engaged learners who aspire to a career in science but the report also reveals that top performers often do not feel well informed about potential career opportunities in science, which is an area school policy and practice can act upon. The link between attitudes and

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motivations is strengthened by evidence suggesting that motivation among top performers is unrelated to socio-economic factors but rather a reflection of their enjoyment and active engagement in science learning inside and outside school. At the same time, in a number of countries there are significant proportions of top performers who show comparatively low levels of interest in science. While these education systems have succeeded in conveying scientific knowledge and competencies to students, they have been less successful in engaging them in science-related issues and fostering their career aspirations in science. These countries may thus not fully realise the potential of these students. Fostering interest and motivation in science thus seems an important policy goal in its own right. The potential payoff seems worth this investment: a large and diverse talent pool ready to take up the challenge of a career in science. In today's global economy, it is the opportunity to compete on innovation and technology.

The report is the product of a collaborative effort between the countries participating in PISA, the experts and institutions working within the framework of the PISA Consortium, and the OECD. The report was drafted by John Cresswell, Miyako Ikeda, Andreas Schleicher, Claire Shewbridge and Pablo Zoido. Henry Levin provided important guidance in the initial stages of the report. The development of the report was steered by the PISA Governing Board, which is chaired by Ryo Watanabe (Japan). The report is published on the responsibility of the Secretary-General of the OECD.



Ryo Watanabe
Chair of the PISA Governing Board



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Executive Summary

This report looks at top-performing students in the PISA 2006 science assessment, their attitudes and motivations, and the schools in which they are enrolled. Top-performers are defined as those 15-year-old students who are proficient at Levels 5 and 6 on the PISA 2006 science scale as compared with strong performers (proficient at Level 4), moderate performers (proficient at Levels 2 and 3), and those who are at risk of being left behind (proficient at Level 1 or below).

Who are top performers in science in PISA 2006?

Top performers on the PISA 2006 science assessment form a diverse group, and the evidence suggests that excellence in science can develop in very different educational settings and circumstances.

- Achieving excellence is not just a question of inherent student ability and it can also relate to specific subject areas. The proportion of top performers varies widely from country to country. While, on average, 9% of OECD students are top performers in science, 20% of all students in Finland and 18% in New Zealand are top performers in science. On average across the OECD, 18% of students are top performers in at least one of the subject areas of science, mathematics or reading. However, only 4% are top performers in all three areas.
- A socio-economically disadvantaged background is not an insurmountable barrier to excellence. In the typical OECD country about a quarter of top performers in science come from a socio-economic background below the country's average. Some systems, however, are even more conducive for students from a relatively disadvantaged background to become top performers in science. For instance, in Japan, Finland and Austria and the partner economies Macao-China and Hong Kong-China, a third or more of the top performers in science come from a socio-economic background below the average of the country.
- Across subject areas and countries, female students are as likely to be top performers as male students. On average across OECD countries, the proportion of top performers across subject areas is practically equal between males and females: 4.1% of females and 3.9% of males are top performers in all three subject areas and 17.3% of females and 18.6% of males are top performers in at least one subject area. These averages, however, hide significant cross country variation and some significant gender gaps across subject areas. While the gender gap among students who are top performers only in science is small (1.1% of females and 1.5% of males), the gender gap is significant among top performers in reading only (3.7% of females and 0.8% of males) and in mathematics (3.7% of females and 6.8% of males).
- Top performers in science tend to be non-immigrant students who speak the test language at home, but in some countries immigrant or linguistic minority students excel as well. Germany, the Netherlands and the partner country Slovenia are the countries where the largest differences, in favour of non-immigrant students and students who speak the test language at home, are found.

Which schools do top performers in science attend?

The evidence from PISA suggests that some school characteristics, policies and practices matter for excellence, and often in ways that interact with the socio-economic context of the schools.



- Top performers in science generally attend schools with student populations characterised by high performance and a relatively advantaged socio-economic background. Many of these schools are private. However, once student and school socio-economic background are accounted for the advantage of private schools disappears in most OECD countries and in some countries it turns in favour of public schools.
- Top performers in science generally attend schools characterised by certain school policies, such as selecting in students according to their academic record, no ability grouping for all subjects or publishing performance data publicly. Yet, perhaps due to specific system characteristics, such as tracking and streaming, there is no consistent pattern across countries.

How do top performers in science experience science teaching and learning?

Learning experiences differ from one student to another. The analysis presented in this report shows that top performers in science are engaged learners who put a significant amount of effort into the study of science, particularly at school. They also actively engage in science-related activities outside school.

- In terms of effort, top performers in science spend more time studying science at school and less time on out-of-school lessons. On average, top performers receive 4 hours of instruction in science at school, half an hour more than strong performers and two hours more than lowest performers. By contrast top performers receive on average 30 minutes of out-of-school lessons a week, whereas the lowest performers receive 45 minutes, which may be attributable to the fact that these out-of-school lessons are largely remedial in nature, rather than fostering scientific talent. Understanding the nature of out-of-school lessons is important, as they are likely to differ across countries. Korea, a country with a large proportion of top performers, is an important exception. Korean top performers take an hour more of out-of-school lessons than lowest performers.
- Top performers in science are engaged science learners: they report that they enjoy learning science, that they want to learn more, that their science lessons are fun and that they are motivated to do well in science. On average 68% of top performers report being happy doing science problems (only 53% of strong performers did so). Over 80% of top performers report that they enjoy acquiring new knowledge in science, are interested in learning about science and generally have fun when learning science (only 50% of lowest performers did so).
- On top of what they do at school, top performers in science get involved in science-related activities outside school. More than a third of top performers regularly or very often watch science programs on TV and read science magazines or science articles in newspapers (only about 15% of lowest performers report the same kind of behaviour). A somewhat smaller proportion of top performers regularly or very often visit science-related websites (21%) or borrow or buy science books (14%). A few top performers attend science clubs (7%) or listen to radio programs on science (5%). Even after accounting for socio-economic background, top performers are significantly more involved in science-related activities than strong performers (in all systems except the partner economy Chinese Taipei).

What attitudes and motivations towards science characterise top performers in science?

Student attitudes and motivations tend to be closely related with student performance.

- Top performers in science care about doing well, in part because they believe that it will pay off in their future academic and professional careers. 81% of top performers report they study science because it is useful for them, 76% because it will improve their career prospects and 70% because they will need it for what they want to study later on.

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- In terms of their motivations, top performers in science report that they value their science learning. More than three quarters of top performers (significantly more than any other group) believe they will use science as adults, find it very relevant to themselves and expect to have many opportunities to use it when they leave school.
- Top performers in science are confident learners. The average *index of self-efficacy* – a measure of the student's level of confidence in their own ability to handle specific scientific tasks effectively and overcome difficulties – of top performers is 40% higher than that of strong performers. More than three quarters of top performers (significantly more than strong performers) reported they can usually give good answers to test questions on science topics, that they understand very well the science concepts they are taught and that they learn science topics quickly. 70% of top performers and 55% of strong performers reported science topics are easy for them.

Do top performers in science aspire to a career in science?

Top performers in science want to continue learning science but often do not feel well informed about science-related careers.

- On average across the OECD, 56% of top performers report that they would like to study science after secondary school. 61% of top performers report they would like to work in a career involving science.
- With respect to their aspirations, top performers in science report feeling well prepared for science-related careers (more so than any other group). Across the OECD countries, for instance, top performers agreed that the subjects they study (82%) and their teachers (81%) provide them with the basic skills and knowledge for a science-related career.
- However, only around than half of top performers in science report being well informed about science-related careers, or about where to find information on science related careers. Only a third of top performers feel well informed about employers or companies that hire people to work in science-related careers.

What do the findings tell us?

Countries vary significantly in the proportion of students who demonstrate excellence in science performance. Interestingly, scientific excellence is only weakly related to average performance in countries, that is, while some countries show large proportions of both high and poor performers, other countries combine large proportions of 15-year-olds reaching high levels of scientific excellence with few students falling behind.

The talent pool of countries differs not just in its relative and absolute size, but also in its composition. Student characteristics such as gender, origin, language, or socio-economic status are related to top performance in science but none of these student characteristics impose an insurmountable barrier to excellence. It is particularly encouraging that in some education systems significant proportions of students with disadvantaged backgrounds achieve high levels of excellence, which suggests that there is no inevitable trade-off between excellence and equity in education.

As the individual socio-economic background of students relates to the prevalence of scientific excellence, so does the socio-economic context in which schools operate. The interaction of this context with specific school policies and practices also needs to be taken into consideration. For example, there are in general higher proportions of top performers in private than in public schools. However, once the socio-economic context of schools is accounted for, the edge for private schools disappears.

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In terms of their experiences, attitudes, motivations and aspirations, top performers in science are dedicated and engaged learners who aspire to a career in science. Top performers in science also tend to spend more time in regular science lessons at school and more frequently engage in science related activities. They are confident learners interested in a broad range of science topics, they enjoy learning science even when the content is challenging and they believe they are good at science. They think that learning science will prove useful for them in their further studies and professional activities and more often aspire to a career in science, whether this is a cause or consequence of their performance and engagement with science. However, top performers often do not feel well informed about potential career opportunities in science, which is an area school policy and practice can act upon. The link between attitudes and motivations is strengthened by evidence suggesting that motivation among top performers is unrelated to socio-economic factors but rather a reflection of their enjoyment and active engagement in science learning inside and outside school.

At the same time, in a number of countries there are significant proportions of top performers who show comparatively low levels of interest in science. While these education systems have succeeded in conveying scientific knowledge and competencies to students, they have been less successful in engaging them in science-related issues and fostering their career aspirations in science. These countries may thus not fully realise the potential of these students. Fostering interest and motivation in science thus seems an important policy goal in its own right. Efforts to this end may relate to improved instructional techniques and a more engaging learning environment at school but they can also extend to students' lives outside school, such as through establishing and making available more and better content on the internet or in video games that applies scientific principles; establishing contests on the Internet with prizes for students who achieve particular levels of performance or stages of accomplishment; more and better television programming using children's cartoons to enlist interests in science and scientific curiosity for younger children; or science fiction novels and series of books on adventures or mysteries based upon scientific and technical knowledge, ingenuity and solutions with characters.

In sum, educational excellence goes hand in hand with promoting student engagement and enjoyment of science learning both inside and outside school. The payoff is quite significant: A large and diverse talent pool ready to take up the challenge of a career in science. In today's global economy, it is the opportunity to compete on innovation and technology.

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Reader's Guide

Data underlying the figures

The data referred to in Chapters 1 to 3 of this report are presented in Appendix A and, with additional detail, on the PISA website (*www.pisa.oecd.org*). Five symbols are used to denote missing data:

a The category does not apply in the country concerned. Data are therefore missing.

c There are too few observations to provide reliable estimates (*i.e.* there are fewer than 30 students or less than 3% of students for this cell or too few schools for valid inferences).

m Data are not available. These data were collected but subsequently removed from the publication for technical reasons.

w Data have been withdrawn at the request of the country concerned.

x Data are included in another category or column of the table.

Calculation of international averages

An OECD average was calculated for most indicators presented in this report. In the case of some indicators, a total representing the OECD area as a whole was also calculated:

- The OECD average corresponds to the arithmetic mean of the respective country estimates.
- The OECD total takes the OECD countries as a single entity, to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools. It illustrates how a country compares with the OECD area as a whole.

In this publication, the OECD total is generally used when references are made to the overall situation in the OECD area. Where the focus is on comparing performance across education systems, the OECD average is used. In the case of some countries, data may not be available for specific indicators, or specific categories may not apply. Readers should, therefore, keep in mind that the terms OECD average and OECD total refer to the OECD countries included in the respective comparisons.

Rounding of figures

Because of rounding, some figures in tables may not exactly add up to the totals. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation.

All standard errors in this publication have been rounded to two decimal places. Where the value 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.005.



Reporting of student data

The report uses "15-year-olds" as shorthand for the PISA target population. PISA covers students who are aged between 15 years 3 months and 16 years 2 months at the time of assessment and who have completed at least 6 years of formal schooling, regardless of the type of institution in which they are enrolled and of whether they are in full-time or part-time education, of whether they attend academic or vocational programmes, and of whether they attend public or private schools or foreign schools within the country.

Reporting of school data

The principals of the schools in which students were assessed provided information on their schools' characteristics by completing a school questionnaire. Where responses from school principals are presented in this publication, they are weighted so that they are proportionate to the number of 15-year-olds enrolled in the school.

Abbreviations used in this report

The following abbreviations are used in this report:

ISCED International Standard Classification of Education

SD Standard deviation

SE Standard error

Further documentation

For further information on the PISA assessment instruments and the methods used in PISA, see the *PISA 2006 Technical Report* (OECD, 2009b) and the PISA website (*www.pisa.oecd.org*).

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1

Excellence in Science Performance

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INTRODUCTION

The rapidly growing demand for highly skilled workers has led to global competition for talent (OECD, 2008). While basic competencies are generally considered important for the absorption of new technologies, high-level competencies are critical for the creation of new knowledge, technologies and innovation. For countries near the technology frontier, this implies that the share of highly educated workers in the labour force is an important determinant of economic growth and social development. There is also mounting evidence that individuals with high level skills generate relatively large amounts of knowledge creation and ways of using it, compared to other individuals, which in turn suggests that investing in excellence may benefit all (Minne *et al.,* 2007).[1] This happens, for example, because highly skilled individuals create innovations in various areas (for example, organisation, marketing, design) that benefit all or that boost technological progress at the frontier. Research has also shown that the effect of the skill level one standard deviation above the mean in the International Adult Literacy Study on economic growth is about six times larger than the effect of the skill level one standard deviation below the mean (Hanushek and Woessmann, 2007).[2]

When parents or policy-makers are asked to describe an excellent education, they often describe in fairly abstract terms the presence of a rich curriculum with highly qualified teachers, outstanding school resources and extensive educational opportunities. Nevertheless, excellent inputs to science education provide no guarantee for excellent outcomes. The approach to educational excellence in PISA is therefore to directly measure the academic accomplishments and attitudes of students and to explore how these relate to the characteristics of individual students, schools and education systems. From this perspective, the report aims to identify the characteristics and educational situations of those students performing at top levels of the PISA assessment and to compare them with the characteristics and situations of those with more modest performance. Such comparisons might hint at potential policy interventions that could raise the performance of all students.

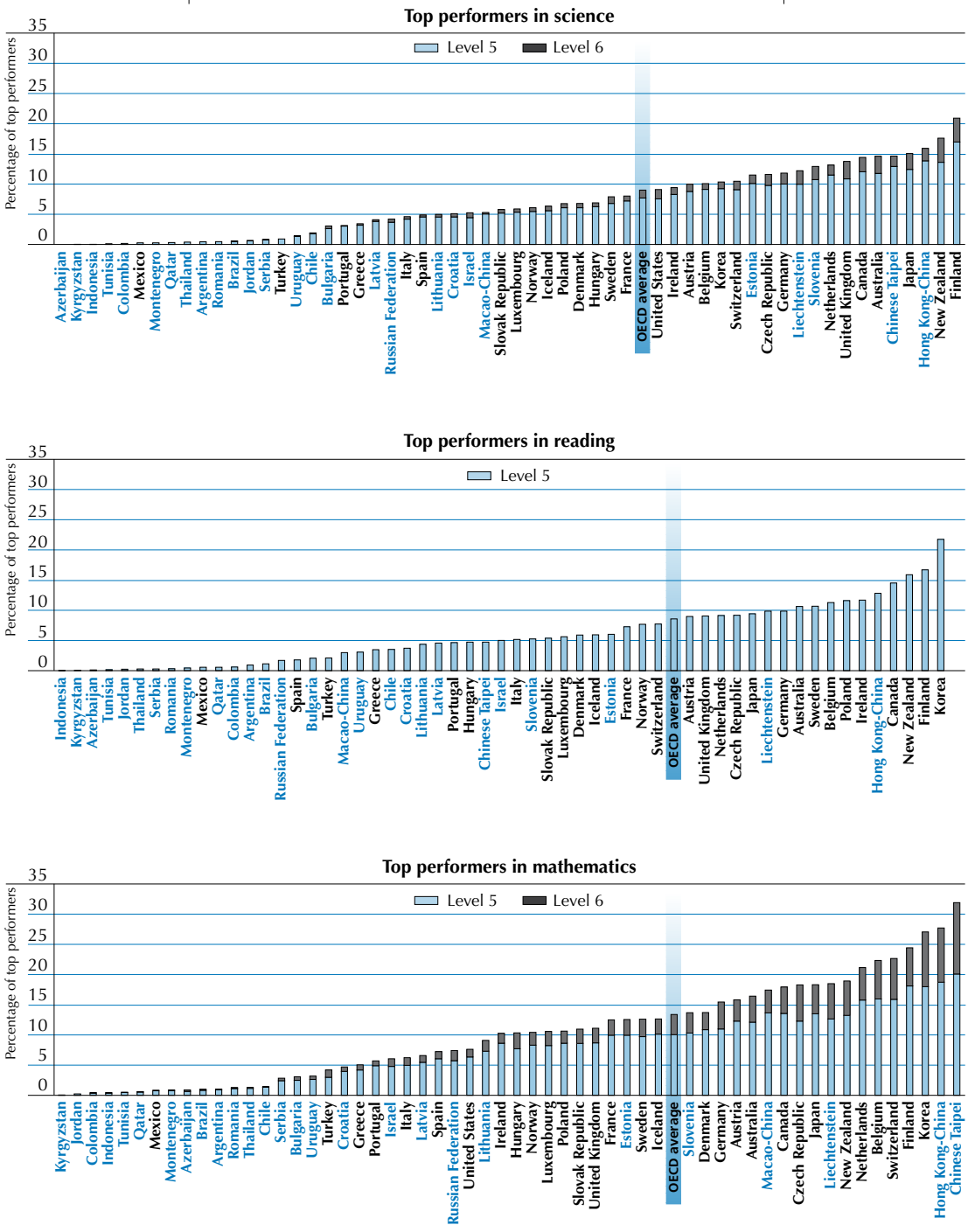
The report looks specifically at top-performing students in the PISA 2006 science assessment, their learning environment and at the schools in which they are enrolled. This report seeks to address the following questions:

- Who are the students who meet the highest performance standards, using top performance as the criterion for educational excellence? What types of families and communities do these students come from?
- What are the characteristics of the schools that they are attending? What kinds of instructional experiences are provided to them in science? How often do they engage in science-related activities outside school?
- What motivations drive them in their study of science? What are their attitudes towards science and what are their intentions regarding science careers?

Top-performers are defined as those students who are proficient at Levels 5 and 6 on the PISA 2006 science scale, strong performers are proficient at Level 4, moderate performers are proficient at Levels 2 and 3, and the lowest performers, those who are at risk, are only proficient at Level 1 or below. At age 15, top-performing students can consistently identify, explain and apply scientific knowledge and knowledge about science in a variety of complex life situations. They can link different information sources and explanations and use evidence from those sources to justify decisions. They clearly and consistently demonstrate advanced scientific thinking and reasoning, and they demonstrate use of their scientific understanding in support of solutions to unfamiliar scientific and technological situations. Students at this level can use scientific knowledge and develop arguments in support of recommendations and decisions that centre on personal, social, or global situations.



Figure 1.1
Top performers in science, reading and mathematics



Countries are ranked in ascending order of the percentage of top performers in each domain of assessment.
Source: *OECD PISA 2006 Database,* Table A1.1.

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The proportion of top performers in science varies widely across countries. Figure 1.1 shows the proportions of top performers for each country in science, reading and mathematics. Although on average across OECD countries, 9% of 15-year-olds reach Level 5 in science, and slightly more than 1% reach Level 6, these proportions vary substantially across countries. For example, among the OECD countries, seven have at least 13% of top performers in science, whereas there are six with 5% or less. Among the partner countries and economies the overall proportions of these top performers also vary considerably from country-to-country with many countries almost absent from representation at Level 6 in science. Similar variability is shown in reading and mathematics with only slight differences in the patterns of these results among countries.

It is noteworthy that the share of 15-year-olds who are top performers in science is distributed unevenly across countries. Of the 57 countries, nearly one-half (25) have 5% or fewer (based on a round percentage) of their 15-year-olds reaching Level 5 or Level 6, whereas four countries have at least 15% – *i.e.* three times as many – with high science proficiency [See Table 2.1a and Table 2.1c, *PISA 2006: Science Competencies For Tomorrow's World* (OECD, 2007)]. However, the variability in percentages in each country with high science proficiency suggests a difference in countries' abilities to staff future knowledge-driven industries with home-grown talent.[3] Among countries with similar mean scores in PISA there is a remarkable diversity in the percentage of top-performing students. For example, France has a mean score of 495 points in science in PISA 2006 and a proportion of 8% of students at high proficiency levels in science (both very close to the OECD average), Latvia is also close to the OECD average in science with 490 points but has only 4% of students at high proficiency, which is less than half the OECD average of 9%. Although Latvia has a small percentage of students at the lowest levels, the result could indicate the relative lack of a highly educated talent pool for the future.

Despite similarities across countries for each subject area, a high rank in one is no guarantee for a high rank in the others. The cross country correlation among these measures is above 0.8 but the definition of top performance is subject area specific and therefore any comparison across subject areas should be interpreted with caution. It is possible however to compare the relative position of countries when compared with others in each subject area. For instance, Ireland is in the top 10% of the distribution of reading top performers across countries but it is in the bottom half of the distribution of mathematics top performers. The partner economy Chinese Taipei for example is in the top 10% of the distribution of mathematics and top performers in science across countries but in the bottom half of the distribution for reading top performers.

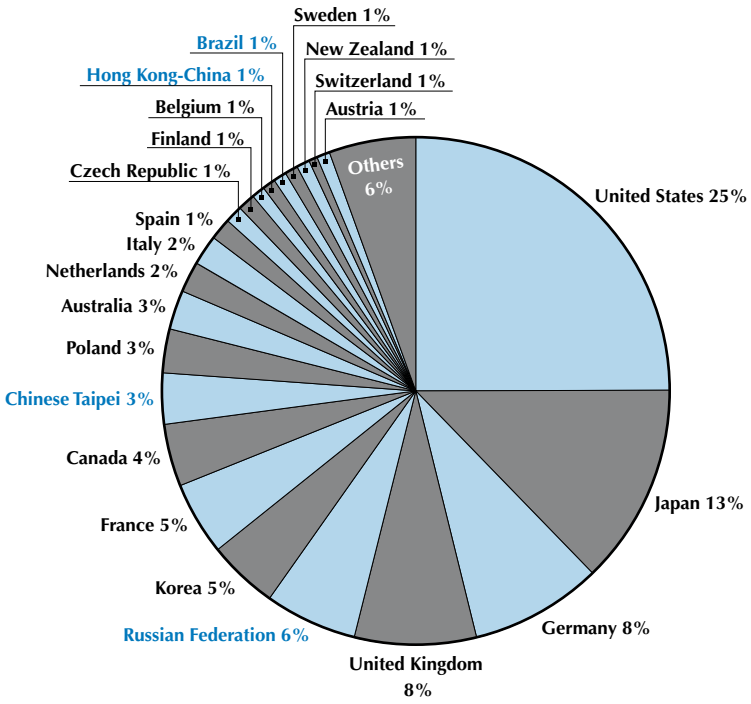
These results highlight the need for a rigorous analysis of excellence patterns across countries. The high variance across countries in the proportion of top performers in science shows that some educational systems give rise to higher proportions of high competency students than others. The differences across subject areas show that different educational experiences result in different types of top performers. The following chapters of this report are devoted to understanding better why educational systems result in different proportions of top performers in science, what characteristics these students have, what schools they tend to attend, how they experience teaching and learning science, their attitudes towards science and their motivations and aspirations for science learning in their future careers.

Figure 1.2 depicts the number of 15-year-old students proficient at Levels 5 and 6 on the PISA science scale by country. Both the proportion of top performers within a country and the size of countries matter when establishing the contribution of countries to the global talent pool: even though the proportion of top performers in science is comparatively low in the United States, the United States takes up a quarter of the pie shown in Figure 1.2, simply because of the size of the country. In contrast Finland, that educates the



Figure 1.2
The global talent pool: a perspective from PISA

Percentage of top performers across all PISA countries and economies



Note: "Others" includes countries that account for 0.5% or less: Hungary, Turkey, Ireland, Israel, Chile, Slovak Republic, Denmark, Norway, Mexico, Greece, Portugal, Slovenia, Thailand, Lithuania, Argentina, Croatia, Bulgaria, Estonia, Latvia, Romania, Colombia, Indonesia, Serbia, Jordan, Uruguay, Macao-China, Iceland, Luxembourg, Tunisia, Liechtenstein, Qatar, Azerbaijan, Kyrgyzstan, Montenegro.

Source: *OECD PISA 2006 Database.*

highest share of 15-year-olds to Levels 5 and 6 in the PISA science scale, only contributes 1% to the OECD pool of top-performing 15-year-old students, because of its small size.

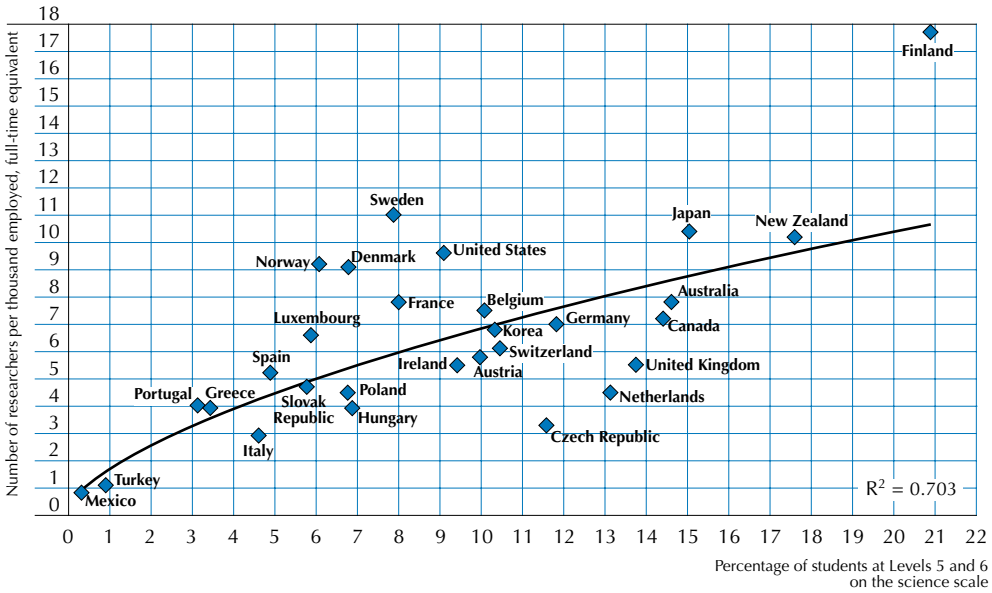
It is not possible to predict to what extent the performance of today's 15-year-olds in science will influence a country's future performance in research and innovation. However, Figure 1.3 portrays the close relationship between a country's proportion of 15-year-olds who scored at Levels 5 and 6 on the PISA science scale and the current number of full-time equivalent researchers per thousand employed. For example, New Zealand with 18% of students in the top two levels has around 10 full time researchers per thousand employees, while Korea with 10% of students in the top two levels has 7 full time researchers per thousand employees. In addition, the correlations between the proportion of 15-year-olds who scored at Levels 5 and 6 and the number of triadic patent families relative to total populations and the gross domestic expenditure on research and development (two other important indicators of the innovative capacity of countries) both exceed 0.5. The corresponding correlations with the PISA mean scores in science are of a similar magnitude. The existence of such correlations does, of course, not imply a causal relationship, as there are many other factors involved.



Figure 1.3

Science top performers in PISA and countries' research intensity

Top performers in the PISA science assessment and countries' research intensity



Source: *OECD Main Science and Technology Indicators 2006,* OECD, Paris. Table 2.1a.

THE OECD PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT

Main features of PISA

PISA is the most comprehensive and rigorous international programme to assess student performance and to collect data on student, family and institutional factors that can help to explain differences in performance. Decisions about the scope and nature of the assessments and the background information to be collected are made by leading experts in participating countries, and are steered jointly by governments on the basis of shared, policy-driven interests. Substantial efforts and resources are devoted to achieving cultural and linguistic breadth and balance in the assessment materials. Stringent quality assurance mechanisms are applied in translation, sampling and data collection. As a consequence, the results of PISA have a high degree of validity and reliability, and can significantly improve understanding of the outcomes of education in the world's economically most developed countries, as well as in a growing number of countries at earlier stages of economic development.

Key features of PISA are its:

- *Policy orientation,* with the design and reporting methods determined by the goal of informing policy and practice.
- *Innovative approach to "literacy",* which is concerned with the capacity of students to extrapolate from what they have learned and to analyse and reason as they pose, solve and interpret problems in a variety of situations. The relevance of the knowledge and skills measured by PISA is confirmed by recent studies tracking young people in the years after they have been assessed by PISA.[4]



- *Relevance to lifelong learning,* which does not limit PISA to assessing students' knowledge and skills but also asks them to report on their own motivation to learn, their beliefs about themselves and their attitudes to what they are learning.
- *Regularity,* enabling countries to monitor changes in educational outcomes over time and in the light of other countries' performances.
- *Consideration of student performance alongside characteristics of students and schools,* in order to explore some of the main features associated with educational success.
- *Breadth of geographical coverage,* with the 57 countries participating in the PISA 2006 assessment representing almost nine-tenths of the world economy.

Three PISA surveys have taken place so far, in 2000, 2003 and 2006, focusing on reading, mathematics and science, respectively but with each subject area assessed to some extent in each administration. This sequence will be repeated with surveys in 2009, 2012 and 2015, allowing continuous and consistent monitoring of educational outcomes.

PISA will also continue to develop new assessment instruments and tools according to the needs of participating countries. These efforts will involve collecting more detailed information on educational policies and practices. They will also include making use of computer-based assessments, not only to measure Information and Communication Technology skills but also to allow for a wider range of dynamic and interactive tasks to assess student knowledge and skills.

Unlike many traditional assessments of student performance in science, PISA seeks to assess not merely whether students can reproduce what they have learned, but also to examine how well they can extrapolate from what they have learned and apply their knowledge in novel settings, ones related to school and non-school contexts. It measures the capacity of students to identify scientific issues, explain phenomena scientifically and use scientific evidence as they encounter, interpret, solve and make decisions in life situations involving science and technology. This approach was taken to reflect the nature of the competencies valued in modern societies, which involve many aspects of life, from success at work to active citizenship. It also reflects the reality of how globalisation and computerisation are changing societies and labour markets. Work that can be done at a lower cost by computers or workers in lower wage countries can be expected to continue to disappear in OECD countries. This is particularly true for jobs in which information can be represented in forms usable by a computer and/or in which the process follows simple, easy-to-explain rules. This suggests that many jobs on offer for young people leaving school will require more developed reasoning skills and the ability to solve non-routine problems. In fact, there is evidence that in the United States labour market there has been a sharp increase in the need for non-routine analytical and interactive tasks (Levy and Murnane, 2007). A growing literature shows that phenomenon is of course not restricted to the United States labour markets. For example, Goos and Manning (2007) offer evidence for the United Kingdom and Dustmann et al. (2007) for Germany. High competency is therefore a tool for pursuing higher productivity, greater innovation, and generally more social well-being. Educational excellence is not only a goal in itself, but a key source of high productivity, innovation and individual and social well-being.

2006 PISA assessment

More than 400 000 students in 57 countries participated in the PISA 2006 assessment, which involved a two-hour test with both open and multiple-choice tasks. Nationally-representative samples were drawn, representing 20 million 15-year-olds. Students also answered a half-hour questionnaire about themselves, and their principals answered a questionnaire about their schools. In 16 countries parents completed a questionnaire about their investment in their children's education and about their views on science related issues and careers. New features of the PISA 2006 assessment included the following:

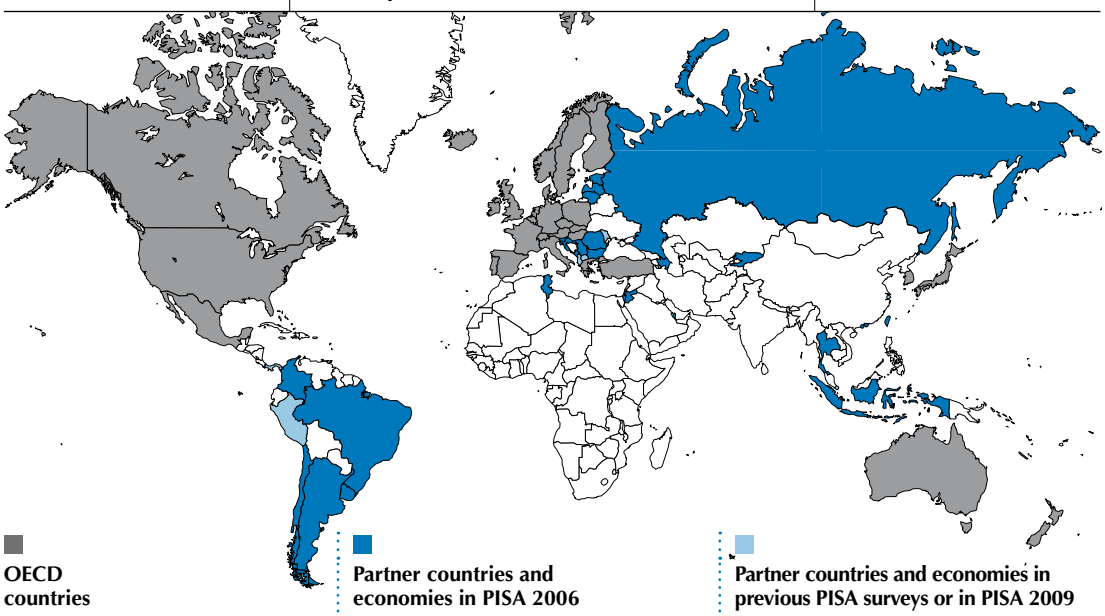


- A detailed profile of student performance in science with reading and mathematics functioning as minor subject areas (in PISA 2000, the focus was on reading, and in PISA 2003, on mathematics).
- Measures of students' attitudes to learning science, the extent to which they are aware of the life opportunities that possessing science competencies may open, and the science learning opportunities and environments which their schools offer.
- Measures of school contexts, instruction, and parental perceptions of students and schools.
- Performance changes in reading over three PISA administrations (six years) and changes in mathematics over two PISA administrations (three years).

The value of PISA in monitoring performance over time is growing, although it is not yet possible to assess to what extent the observed differences in performance are indicative of longer-term trends. With science being the main assessment area for the first time, results in PISA 2006 provided the baseline for future measures of change in this subject.

Figure 1.4 shows the 30 OECD countries and the 27 partner countries and economies that participated in PISA 2006.

Figure 1.4
A map of PISA countries and economies



OECD countries

Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Japan
Korea
Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Republic
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States

Partner countries and economies in PISA 2006

Argentina
Azerbaijan
Brazil
Bulgaria
Chile
Colombia
Croatia
Estonia
Hong Kong-China
Indonesia
Israel
Jordan
Kyrgyzstan
Latvia
Liechtenstein
Lithuania
Macao-China
Montenegro
Qatar
Romania
Russian Federation
Serbia
Slovenia
Chinese Taipei
Thailand
Tunisia
Uruguay

Partner countries and economies in previous PISA surveys or in PISA 2009

Albania
Shanghai-China
Former Yugoslav Republic of Macedonia
Moldova
Panama
Peru
Singapore
Trinidad and Tobago



With more than one-half of the assessment time devoted to science, the initial PISA 2006 report provided much greater detail on science performance than was possible in PISA 2000 and PISA 2003. As well as calculating overall performance scores, it was possible to report separately on different science competencies and to establish for each performance scale conceptually grounded proficiency levels that relate student performance scores to what students are typically able to do. Students received scores for their capacity in each of the three science competencies (*identifying scientific issues, explaining phenomena scientifically* and *using scientific evidence*). Estimates were also obtained at the country level for students' knowledge about science (*i.e.* their knowledge of the processes of science as a form of enquiry) and knowledge of science (*i.e.* their capacity in the science content areas of "Earth and space systems", "Physical systems" and "Living systems").

Definition of top performers in science

PISA 2006 was devoted to assessing students' science knowledge and application of this knowledge, although testing was also done in reading and mathematics. It divided student science performance into six proficiency levels (OECD, 2006a). At Level 1 students have very limited scientific knowledge and are only able to provide possible explanations in familiar contexts. At Level 2 students draw conclusions from simple investigations. At Level 3 students can identify clearly scientific issues in a variety of contexts and apply scientific principles, facts and knowledge to explain phenomena. At Level 4 students can address specific phenomena and situations, making inferences about science or technology, and they can reflect and communicate decisions using scientific knowledge and evidence. In addition, at Level 5:

> *…students can identify the scientific components of many complex life situations, apply both scientific concepts and knowledge about science to these situations, and compare, select and evaluate appropriate scientific evidence for responding to life situations. Students at this level can use well-developed inquiry abilities, link knowledge appropriately and bring critical insights to situations. They can construct explanations based on evidence and arguments based on their critical analysis.*

And additionally, at the most advanced level (Level 6):

> *…students can consistently identify, explain and apply scientific knowledge and knowledge about science in a variety of complex life situations. They can link different information sources and explanations and use evidence from those sources to justify decisions. They clearly and consistently demonstrate advanced scientific thinking and reasoning, and they demonstrate willingness to use their scientific understanding in support of solutions to unfamiliar scientific and technological situations. Students at this level can use scientific knowledge and develop arguments in support of recommendations and decisions that centre on personal, social or global situations.*

For the purposes of this report the top performers in science are defined as those students who performed at the top two levels of science proficiency, that is at Levels 5 and 6. This definition captures the potential global talent pool (at least for the part emerging from those countries that participated in PISA 2006). One clear benefit from a definition based on such an international standard is that it allows for straight forward comparability across countries. It is clear what these students can do regardless of their educational system. Strong performers are defined as those who performed at Level 4, moderate performers as those who performed at Levels 2 and 3, and lowest performers as those who performed at Level 1 or below.

This is only one possible way of defining top performing students. An alternative approach could have been to consider the top of the distribution of performance within each country. The advantage of this approach is its focus on the relative performance of students. As top performers are more likely to compare themselves with their peers, it is possible that students at the top end of the distribution in each country (*e.g.* the top 10%)



share some similarities across countries. An obvious drawback to this approach is that these students have very different proficiency levels. One clear benefit from a definition based on an international standard, such as performance at Levels 5 and 6, is that it allows for straightforward comparability across countries. It is clear what these students can do regardless of their educational system. In practical terms however, both definitions classify many of the same students as top performers. Only for countries with very low proportions of students scoring at Levels 5 and 6 in the PISA science scale is the set of students captured very different. It is precisely for these cases that the biggest differences in performance come about. The comparison between these two definitions in countries with less than 3% of top performers in science among all students is further complicated by the fact that evidence based on such a small sample of students is not reliable. Whenever a comparison is possible and reliable, the main results discussed below do not vary significantly across these two definitions.

Although across the OECD on average about 95% of students were at least able to perform tasks at Level 1, 81% at Level 2, 57% at Level 3, and 29% at Level 4, only 9% reached Levels 5 and 6 (with only 1% reaching Level 6). Thus, only 9% of the 15-year-old student population across the OECD countries are top performers in science, as defined by this report - a highly selective group. It is this talented group of top performers that is the focus of this report (see Box 1 for definitions of top performers for all three subject areas).

Box 1.1 **Defining and comparing top performers in PISA**

Definitions used in this report

Top performers in science – students proficient at Levels 5 and 6 of the PISA 2006 science assessment (*i.e.* higher than 633.33 score points)

Top performers in reading – students proficient at Level 5 of the PISA 2006 reading assessment (*i.e.* higher than 625.61 score points)

Top performers in mathematics – students proficient at Levels 5 and 6 of the PISA 2006 mathematics assessment (*i.e.* higher than 606.99 score points)

Note that this paper uses the term "top performers" as shorthand for students' proficient at Levels 5 and 6 in science in PISA 2006. Unless otherwise specified, "top performers" does not necessarily comprise top performers in reading and mathematics. The cutoff points for each level varies by subject area and the levels of proficiency are not equivalent across subject areas. In other words, it is not the same to be proficient at Levels 5 and 6 in science, mathematics or reading. Because of the different nature and content of the three testing areas the cutoff points for Levels 5 and 6 for each subject area are different and can therefore result in different proportions of top performers.

Comparing top performers in science to other students

Four "performance groups" are used in this report to facilitate comparison of top performers in science with other students. In addition to the top performers:

Strong performers – students proficient at Level 4 of the PISA 2006 science assessment

Moderate performers – students proficient at Levels 2 and 3 of the PISA 2006 science assessment

Lowest performers – students proficient at Level 1 or below of the PISA 2006 science assessment



Examples of tasks that top performers in science can typically do

This section presents a selection of the questions that are representative of tasks that the top performers can typically complete, including two examples of questions classified at Level 6 (ACID RAIN – Question 5 and GREENHOUSE – Question 5) and one example of a question classified at Level 5 (GREENHOUSE – Question 4). For a selection of released items see *Take the Test: Sample Questions from OECD's PISA Assessments* (OECD, 2009). While all three questions require students to construct a response, each tests different scientific knowledge and requires students to draw upon different scientific competencies.

Questions at the highest levels of proficiency in PISA science (Levels 5 and 6) require students to demonstrate strong understanding of scientific knowledge in different areas, as well as insight and analytical skill. Further, these questions often require students to construct and clearly communicate a response, by way of an argument or explanation. Each example is further elaborated below.

ACID RAIN – Question 5 belongs to the PISA knowledge category "scientific enquiry", because it requires students to exhibit knowledge about the structure of an experiment. This question falls in the PISA competency area of *identifying scientific issues*. To answer this question correctly, students need to both understand the experimental modelling used and to articulate the method used to control a major variable. Specifically, students need to demonstrate understanding that a reaction will not occur in water and that vinegar is the necessary reactant. This question tests students' knowledge of the use of a control in scientific experiments. Students need to develop an explanation and communicate this clearly. Those students who provide an explanation to include this step in the experiment in order to compare with the test of vinegar and marble, but who do not show that the acid (vinegar) is necessary for the reaction, are given partial credit, with the item classified as Level 3.

GREENHOUSE – Question 5 belongs to the PISA knowledge category "Earth and space systems", because it requires students to exhibit knowledge about different factors in the Earth's atmosphere. This question falls in the PISA competency area of *explaining phenomena scientifically*. To answer this correctly, students need first to identify the variables and have sufficient understanding of methods of investigation to recognise the influence of other factors. Second, students need to recognise the scenario in context and identify its major components. This involves a number of abstract concepts and their relationships in determining what other factors might affect the relationship between the Earth's temperature and the amount of carbon dioxide emissions in the atmosphere.

GREENHOUSE – Question 4 belongs to the PISA knowledge category "scientific explanations", because it requires students to exhibit knowledge in reading and interpreting data presented in graphs. This question falls in the PISA competency area of *using scientific evidence*. To answer this correctly, students need to identify a portion of a graph that does not provide evidence supporting a conclusion. Specifically, students need to locate a portion of the graphs where curves are not both ascending or descending and provide this finding as part of a justification for a conclusion. Therefore, students need to explain the difference they have identified. Those students that only identify that there is a difference but provide no explanation of this are classified at Level 4.



Figure 1.5
ACID RAIN

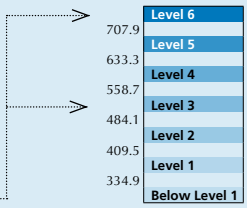
Below is a photo of statues called Caryatids that were built on the Acropolis in Athens more than 2500 years ago. The statues are made of a type of rock called marble. Marble is composed of calcium carbonate.



In 1980, the original statues were transferred inside the museum of the Acropolis and were replaced by replicas. The original statues were being eaten away by acid rain.

ACID RAIN – *QUESTION 5 (S485Q05)*

Question type: *Open-constructed response*
Competency: *Identifying scientific issues*
Knowledge category: *"Scientific enquiry" (knowledge about science)*
Application area: *"Hazards"*
Setting: *Personal*
Difficulty: *Full credit 717; Partial credit 513*
Percentage of correct answers (OECD countries): *35.6 %*



Students who did this experiment also placed marble chips in pure (distilled) water overnight.
Explain why the students included this step in their experiment.

.....

.....

Scoring

Full Credit: To show that the acid (vinegar) is necessary for the reaction. For example:

- To make sure that rainwater must be acidic like acid rain to cause this reaction.
- To see whether there are other reasons for the holes in the marble chips.
- Because it shows that the marble chips don't just react with any fluid since water is neutral.

Partial Credit: To compare with the test of vinegar and marble, but it is not made clear that this is being done to show that the acid (vinegar) is necessary for the reaction. For example:

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- To compare with the other test tube.
- To see whether the marble chip changes in pure water.
- The students included this step to show what happens when it rains normally on the marble.
- Because distilled water is not acid.
- To act as a control.
- To see the difference between normal water and acidic water (vinegar).

Comment

Students gaining full credit for this question understand that it is necessary to show that the reaction will not occur in water. Vinegar is a necessary reactant. Placing marble chips in distilled water demonstrates an understanding of a control in scientific experiments.

Students who gain partial credit show an awareness that the experiment involves a comparison but do not communicate this in a way that demonstrates they know that the purpose is to show that vinegar is a necessary reactant.

The question requires students to exhibit knowledge about the structure of an experiment and therefore it belongs in the "Scientific enquiry" category. The application is dealing with the hazard of acid rain but the experiment relates to the individual and thus the setting is personal.

A student obtaining credit for the Level 6 component of this question is able to both understand the experimental modelling used and to articulate the method used to control a major variable. A student correctly responding at Level 3 (partial credit) is only able to recognise the comparison that is being made without appreciating the purpose of the comparison.



Figure 1.6
GREENHOUSE

Read the texts and answer the questions that follow.

THE GREENHOUSE EFFECT: FACT OR FICTION?

Living things need energy to survive. The energy that sustains life on the Earth comes from the Sun, which radiates energy into space because it is so hot. A tiny proportion of this energy reaches the Earth.

The Earth's atmosphere acts like a protective blanket over the surface of our planet, preventing the variations in temperature that would exist in an airless world.

Most of the radiated energy coming from the Sun passes through the Earth's atmosphere. The Earth absorbs some of this energy, and some is reflected back from the Earth's surface. Part of this reflected energy is absorbed by the atmosphere.

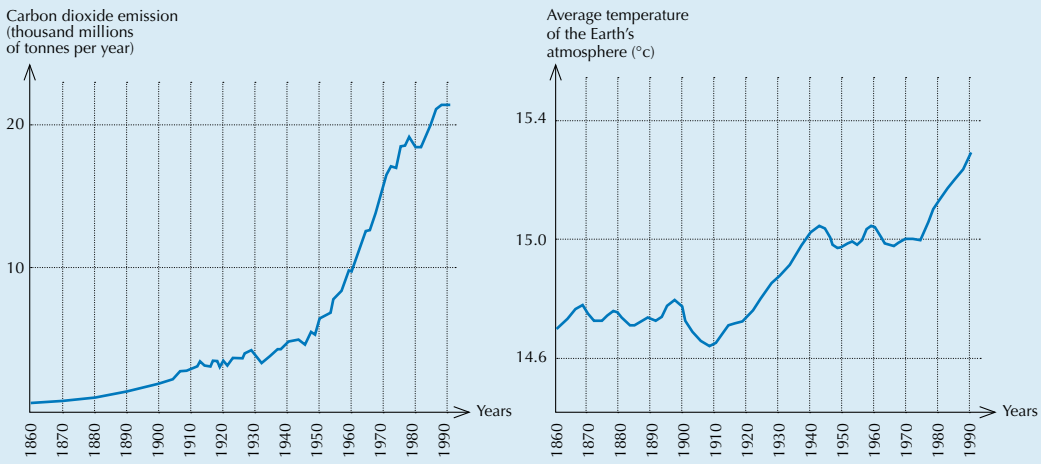
As a result of this the average temperature above the Earth's surface is higher than it would be if there were no atmosphere. The Earth's atmosphere has the same effect as a greenhouse, hence the term greenhouse effect.

The greenhouse effect is said to have become more pronounced during the twentieth century.

It is a fact that the average temperature of the Earth's atmosphere has increased. In newspapers and periodicals the increased carbon dioxide emission is often stated as the main source of the temperature rise in the twentieth century.

A student named André becomes interested in the possible relationship between the average temperature of the Earth's atmosphere and the carbon dioxide emission on the Earth.

In a library he comes across the following two graphs.

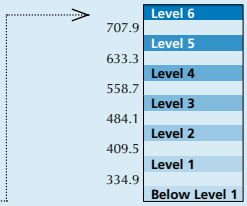


André concludes from these two graphs that it is certain that the increase in the average temperature of the Earth's atmosphere is due to the increase in the carbon dioxide emission.

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GREENHOUSE – *QUESTION 5 (S114Q)*



Question type: *Open-constructed response*
Competency: *Explaining phenomena scientifically*
Knowledge category: *"Earth and space systems" (knowledge of science)*
Application area: *"Environment"*
Setting: *Global*
Difficulty: *709*
Percentage of correct answers (OECD countries): *18.9%*

André persists in his conclusion that the average temperature rise of the Earth's atmosphere is caused by the increase in the carbon dioxide emission. But Jeanne thinks that his conclusion is premature. She says: "Before accepting this conclusion you must be sure that other factors that could influence the greenhouse effect are constant".
Name one of the factors that Jeanne means.

.....

.....

Scoring

Full Credit:

Gives a factor referring to the energy/radiation coming from the Sun. For example:

- The sun heating and maybe the earth changing position.
- Energy reflected back from Earth. *[Assuming that by "Earth" the student means "the ground".]*

Gives a factor referring to a natural component or a potential pollutant. For example:

- Water vapour in the air.
- Clouds.
- The things such as volcanic eruptions.
- Atmospheric pollution (gas, fuel).
- The amount of exhaust gas.
- CFC's.
- The number of cars.
- Ozone (as a component of air). *[Note: for references to depletion, use Code 03.]*

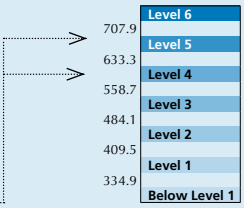
Comment

Question 5 of GREENHOUSE is an example of Level 6 and of the competency explaining phenomena scientifically. In this question, students must analyse a conclusion to account for other factors that could influence the greenhouse effect. This question combines aspects of the two competencies identifying scientific issues and explaining phenomena scientifically. The student needs to understand the necessity of controlling factors outside the change and measured variables and to recognise those variables. The student must possess sufficient knowledge of "Earth systems" to be able to identify at least one of the factors that should be controlled. The latter criterion is considered the critical scientific skill involved so this question is categorised as explaining phenomena scientifically. The effects of this environmental issue are global which defines the setting.

As a first step in gaining credit for this question the student must be able to identify the change and measured variables and have sufficient understanding of methods of investigation to recognise the influence of other factors. However, the student also needs to recognise the scenario in context and identify its major components. This involves a number of abstract concepts and their relationships in determining what "other" factors might affect the relationship between the Earth's temperature and the amount of carbon dioxide emissions into the atmosphere. This locates the question near the boundary between Level 5 and 6 in the explaining phenomena scientifically category.



GREENHOUSE – *QUESTION 4 (S114Q04)*



Question type: *Open-constructed response*
Competency: *Using scientific evidence*
Knowledge category: *"Scientific explanations" (knowledge about science)*
Application area: *"Environment"*
Setting: *Global*
Difficulty: *Full credit 659; Partial credit 568*
Percentage of correct answers (OECD countries): *34.5%*

Another student, Jeanne, disagrees with André's conclusion. She compares the two graphs and says that some parts of the graphs do not support his conclusion.

Give an example of a part of the graphs that does not support André's conclusion. Explain your answer.

.....

.....

.....

Scoring

Full Credit:

Refers to one particular part of the graphs in which the curves are not both descending or both climbing and gives the corresponding explanation. For example:

- In 1900–1910 (about) CO_2 was increasing, whilst the temperature was going down.
- In 1980–1983 carbon dioxide went down and the temperature rose.
- The temperature in the 1800s is much the same but the first graph keeps climbing.
- Between 1950 and 1980 the temperature didn't increase but the CO_2 did.
- From 1940 until 1975 the temperature stays about the same but the carbon dioxide emission shows a sharp rise.
- In 1940 the temperature is a lot higher than in 1920 and they have similar carbon dioxide emissions.

Partial Credit:

Mentions a correct period, without any explanation. For example:

- 1930–1933.
- before 1910.

Mentions only one particular year (not a period of time), with an acceptable explanation. For example:

- In 1980 the emissions were down but the temperature still rose.

Gives an example that doesn't support André's conclusion but makes a mistake in mentioning the period. *[Note: There should be evidence of this mistake – e.g. an area clearly illustrating a correct answer is marked on the graph and then a mistake made in transferring this information to the text.]* For example:

- Between 1950 and 1960 the temperature decreased and the carbon dioxide emission increased.

Refers to differences between the two curves, without mentioning a specific period. For example:

- At some places the temperature rises even if the emission decreases.
- Earlier there was little emission but nevertheless high temperature.
- When there is a steady increase in graph 1, there isn't an increase in graph 2, it stays constant. *[Note: It stays constant "overall".]*
- Because at the start the temperature is still high where the carbon dioxide was very low.



Refers to an irregularity in one of the graphs. For example:

- It is about 1910 when the temperature had dropped and went on for a certain period of time.
- In the second graph there is a decrease in temperature of the Earth's atmosphere just before 1910.

Indicates difference in the graphs, but explanation is poor. For example:

- In the 1940s the heat was very high but the carbon dioxide very low. *[Note: The explanation is very poor, but the difference that is indicated is clear.]*

Comment

Another example from GREENHOUSE centres on the competency using scientific evidence and asks students to identify a portion of a graph that does not provide evidence supporting a conclusion. This question requires the student to look for specific differences that vary from positively correlated general trends in these two graphical datasets. Students must locate a portion where curves are not both ascending or descending and provide this finding as part of a justification for a conclusion. As a consequence it involves a greater amount of insight and analytical skill than is required for Q03. Rather than a generalisation about the relation between the graphs, the student is asked to accompany the nominated period of difference with an explanation of that difference in order to gain full credit.

The ability to effectively compare the detail of two datasets and give a critique of a given conclusion locates the full credit question at Level 5 of the scientific literacy scale. If the student understands what the question requires of them and correctly identifies a difference in the two graphs, but is unable to explain this difference, the student gains partial credit for the question and is identified at Level 4 of the scientific literacy scale.

This environmental issue is global which defines the setting. The skill required by students is to interpret data graphically presented so the question belongs in the "Scientific explanations" category.



Notes

1. At the macro-economic level, skills can lead to positive external effects through research and development activity. Research and development creates new knowledge that is often difficult to appropriate by the producer of the knowledge. This is because new knowledge is at least partially non-excludable and non-rival. Once the new knowledge is produced, other individuals in society can obtain at least a part of it at no cost. The social return to the new knowledge is thus larger than the private return of the producer of the knowledge.

2. Hanushek and Woessmann (2007) have included the shares of individuals that performed one standard deviation above (600 score points) and below (400 score points) on the International Adult Literacy Survey (IALS) scale jointly into a growth regression. The threshold of 400 IALS score points approximated basic literacy and numeracy while the threshold of 600 sought to capture top performance. They found that the effect of the high performance level was about six times larger than the effect of the lower level (and this relationship remained essentially unchanged when various control variables were added).

3. The proportion of science and engineering occupations in the United States that are filled by tertiary-educated workers born abroad increased from 14 to 22% between 1990 and 2000, and from 24 to 38% when considering solely doctorate-level science and engineering workers (US National Science Board, 2003). In the European Union, 700 000 additional researchers will be required merely to reach the Lisbon Goals on research in 2010. In acknowledgement of these growing needs for highly-skilled workers, most European economies have started to review their immigration legislation to encourage the settlement of tertiary-educated individuals, and in some cases, to recruit large numbers of international students with a view to granting them residence status upon completion of their studies.

4. There are at least three interesting country case studies in Canada (for more information, visit *www.pisa.gc.ca/yits.shtml*), Denmark (for more information see *www.sfi.dk/sw19649.asp*) and Australia (for more information see *www.acer.edu.au*).



2

Students Who Excel

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WHO ARE TOP PERFORMING STUDENTS IN SCIENCE?

This chapter aims to shed light on the type of students who are top performers in science in PISA. Are they, for example, good all-round students, or do they excel just in science? Are males and females equally represented among the top performers? How well represented are students with an immigrant background or students speaking a language at home different to the language they use at school? Are students from less advantaged socio-economic backgrounds excelling?

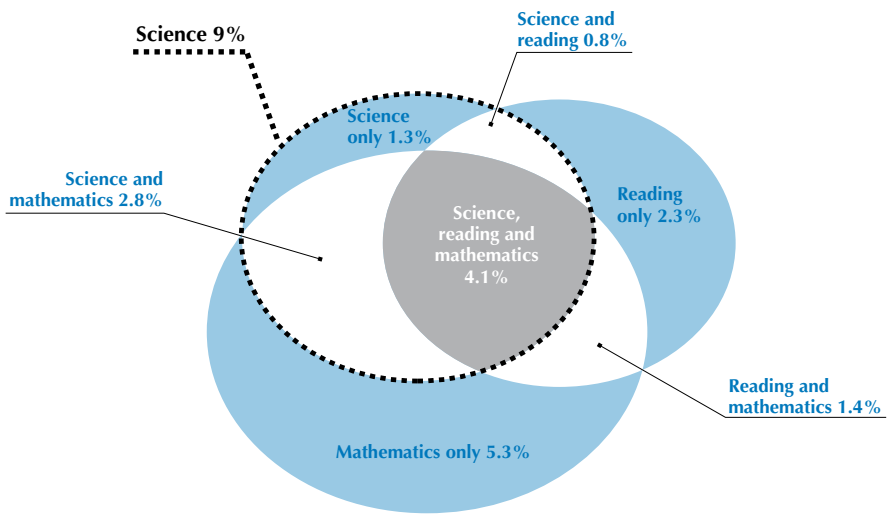
Understanding who top performers in science are and whether or not they share some individual characteristics within and across countries can provide stakeholders and policy makers with valuable insights for effective policy design and implementation for educational excellence.

Are top performers in science also top performers in mathematics and reading?

A common stereotype, running from folk culture on Albert Einstein to fictional characters such as boy-genius Jimmy Neutron, holds that students who are proficient in science are narrowly specialised in that field. That is, they may have special performance and talents in science, but this capability has come about because of a sacrifice in other subjects. As noted earlier, although PISA 2006 focused on science, it also assessed reading and mathematics. It is therefore possible to examine the portion of top performers in science that are also among top performers in reading and mathematics.[1]

Figure 2.1 provides some of these results across OECD countries. The parts in the Venn diagram shaded in blue represent the percentage of the 15-year-old students who were top performers in just one of the three assessment subject areas, that is, in either science, reading or mathematics. The white parts in the diagram show the percentage of students who were top performers in two of the assessment subject areas. The part shaded in grey in the middle of the diagram shows the percentage of the 15-year-old students who were top performers in all three assessment subject areas.

Figure 2.1
Overlapping of top performers in science, reading and mathematics on average in the OECD



Note: Non top performers in any of the three domains: 82.1%.
Source: *OECD PISA 2006 Database,* Table A2.1a.

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Across OECD countries, 4% of 15-year-old students were top performers in all three assessment subject areas: science, reading and mathematics. About 3% of students were top performers in both science and mathematics but not in reading, while just under 1% of students were top performers in both science and reading but not in mathematics and more than 1% were top performers in both reading and mathematics but not in science. The percentage of students who are top performers in both science and mathematics is greater than the percentages who are top performers in science and reading or in reading and mathematics. This is not a surprising finding: the complementarities between science and mathematics learning are widely discussed in the literature (Rutherford and Ahlgren, 1990; Goldman and Greeno, 1998).[2]

It is noteworthy that not all countries show the same patterns. There was substantial variation among countries, for example, in the percentages of top performers in science who are also top performers in both reading and mathematics. Such students comprised 9.5% of 15-year-old students in Finland, 8.9% in New Zealand, 7.8% in Korea, 7.0% in Canada, 7.7% in the partner economy Hong Kong-China, and 7.2% in the partner country Liechtenstein, while in four OECD countries and 17 partner countries, less than 1% of students are top performers in all three domains (Table A2.1a).

These results highlight the diversity of top performers in science. Across subject areas, a significant proportion of top performers in science excel in some other subject area. On average across OECD countries, for example, nearly 45% of science top performers are also top performers in both mathematics and reading (Table A2.1a). In six OECD countries, 50% or more of science top performers are also top performers in the other two subject areas; the proportion in Korea is 76%. While on average across OECD countries there are more top performers in science who excel also in mathematics but not reading, the proportion that excels in all three subject areas is significantly larger. The variation across countries in all these proportions highlights that different educational systems result in different kinds of top performers.

Are males and females equally represented among top performers?

Gender gaps are important from an equity point of view and because their analysis can provide insights on why some students perform better than others. One of the main messages emerging from previous analyses of PISA assessments is that student engagement explains a large part of the performance advantage in favour of female students in reading and a large part of the performance advantage in favour of males in mathematics.

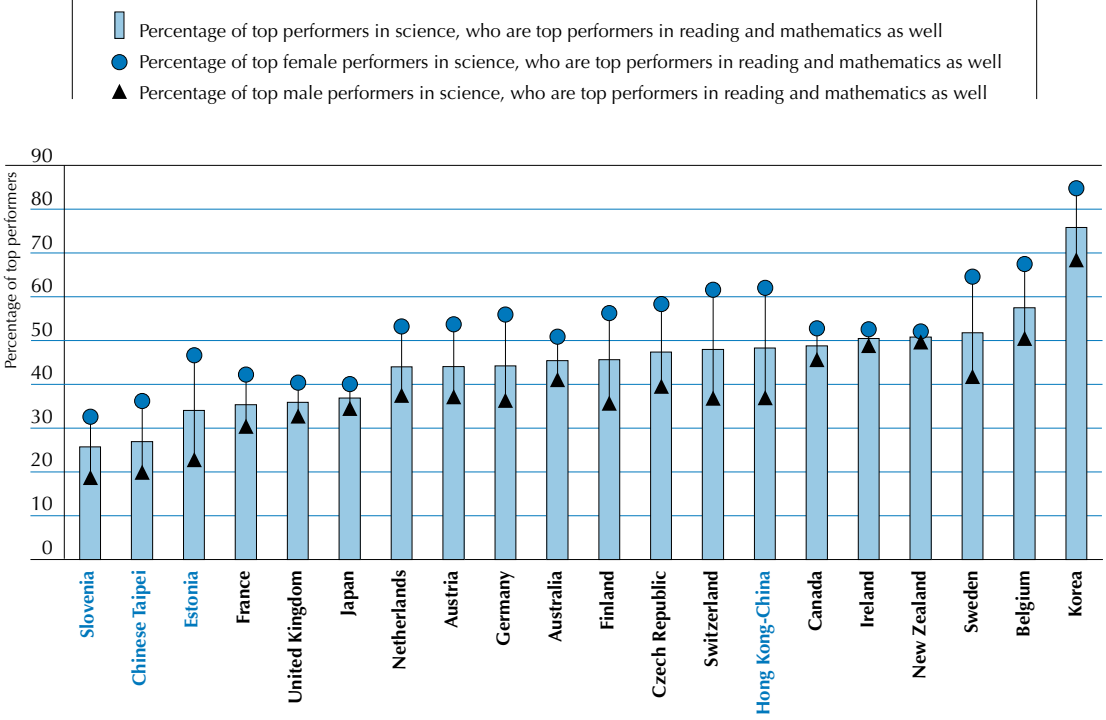
In science gender patterns are more nuanced. While the data show small or no gender gaps on the overall science PISA scale, significant gender differences emerge on the science subscales. Female students perform better than males in the *identifying scientific issues* (which explores the capacity of students to recognise issues that are possible to investigate scientifically, to identify keywords to search for scientific information, and to recognise the key features of a scientific investigation) and males do better than females in *explaining phenomena scientifically* (which explores the capacity of students to apply *knowledge of science* in a given situation, describe or interpret phenomena scientifically and predict changes, and identify appropriate descriptions, explanations, and predictions). There is no significant difference for the competency *using scientific evidence* (which explores the capacity of students to interpret scientific evidence and make and communicate conclusions, identify the assumptions, evidence and reasoning behind conclusions, and reflect on the societal implications of science and technological developments). Across different areas of science-related knowledge, males tend to outperform females in the areas of "Physical systems" and "Earth and space systems", while no gender pattern emerges in the area of "Living systems". *Gender Matters: a comparison of performance and attitudes in PISA* (OECD, 2009c) and the *PISA Data Analysis Manual* (OECD, 2009d) also show that in all areas and for all countries, males had a greater variation of performance than females, that is, they tend to have comparatively higher proportions of top performers but also of students at risk.



While there is no difference in the average performance of males and females, males tend to show a marked advantage among the top performers. In eight of the 17 OECD countries at least 3% of both males and females among the top performers in science, there are significantly higher proportions of males than females among the top performers in science (Table A2.2). There are no countries where there are significantly higher proportions of females than males among the top performers in science.

On average across the OECD countries, 44% of the top performers in science were also top performers in reading and mathematics, but this was the case for 50% of females and 37% of males (Tables A2.1a and A2.1b). Figure 2.2 shows results for countries with available data. These results indicate that males do seem to be somewhat more specialised than females in their science expertise.

Figure 2.2
Overlapping of top performers by gender



Countries are ranked in ascending order of the percentage of top performers in science.
Source: *OECD PISA 2006 Database,* Table A2.1b.

Also in mathematics a higher proportion of top performers can be found among males than among females in all OECD countries except the Czech Republic, Iceland and Sweden. In contrast, in reading, the opposite pattern prevails. Females are more likely to be top performers than males in reading in all OECD countries except Japan where the difference between males and females is not significant. For example, in Finland, 23.7% of females are top performers in reading, while this is 9.6% for males (Table A2.2). In sum, across three subject subject areas, females are as likely to be top performers as males. Across the OECD, 17.3% of females and 18.6% of males are top performers at least one of the three subject areas (Table A2.1b).



How well represented are students with an immigrant background among the top performers?

In some countries a significant proportion of students (or their parents) were born outside of the country. Students who do not speak the language of instruction at home constitute another important minority of students. As the report *Where Immigrant Students Succeed – A Comparative Review of Performance and Engagement in PISA 2003* (OECD, 2005) shows, an immigrant background can have a significant impact on student performance. While the proportion of students with an immigrant background does not seem to relate to the average performance of countries, from an equity perspective it is important to understand the effect of these background characteristics on excellence.

This section analyses the percentages of top performers by their immigrant status and the language they speak at home. In some of the OECD and partner countries and economies only a negligible proportion of students (less than 30 students or less than 3% of students) have an immigrant background or speak a language at home that is different from the language they use at school. Estimates based on such a small number of observations are not reliable and therefore data for these countries are not examined here. Native students are students who were born in the country of assessment and have at least one parent who was also born in the country of assessment. Students with an immigrant background are students whose parents were born in a foreign country. This group includes both first-generation students and second-generation students. First-generation students are those born outside of the country of assessment whose parents are also foreign-born. Second-generation students are those born in the country of assessment with both parents foreign-born.

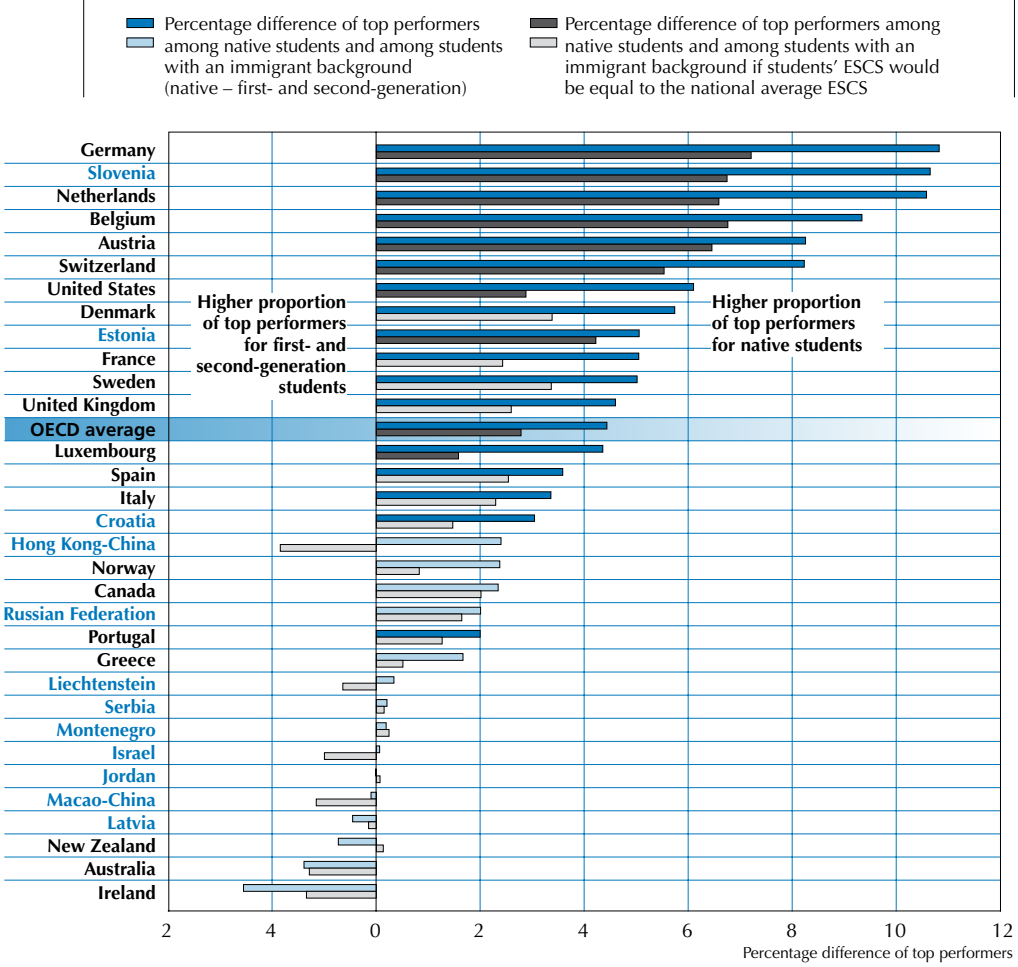
In general, for those countries with sufficient numbers for analysis to be valid, there are more top performers in science among native students than among students from an immigrant background but in part this just reflects differences in socio-economic backgrounds. Indeed, this difference is no longer significant after accounting for students' socio-economic background in half of the countries being compared.

The comparison of top performers between students with an immigrant background and native students shows different results across countries (Table A2.3 and Figure 2.3). In some countries, students from an immigrant background are as likely to be higher performers as native students. For example, in Australia, Canada, Greece, Ireland, Norway and New Zealand, as well as in the partner countries and economies Hong Kong-China, Israel, Liechtenstein, Latvia, Macao-China and the Russian Federation, there are no significant differences in the proportion of top performers among native students and students with an immigrant background.[3]

The excellence gap between students from an immigrant background and native students reflects in part different immigration patterns and policies. Top performing immigrants are generally found in countries with relatively selective immigrant policies favouring more educated and resource-endowed families. For example, families moving to Australia, Canada and New Zealand are often selected according to characteristics that are considered important for integration, such as educational qualifications and language skills (OECD, 2006b). Other countries however do not or cannot impose such restrictions. Another reason for the gap is differences in socio-economic backgrounds. In fact, in most countries the difference between native students and students with an immigrant background is not significant once students' socio-economic backgrounds are taken into account.



Figure 2.3
Percentage difference of top performers by immigrant status



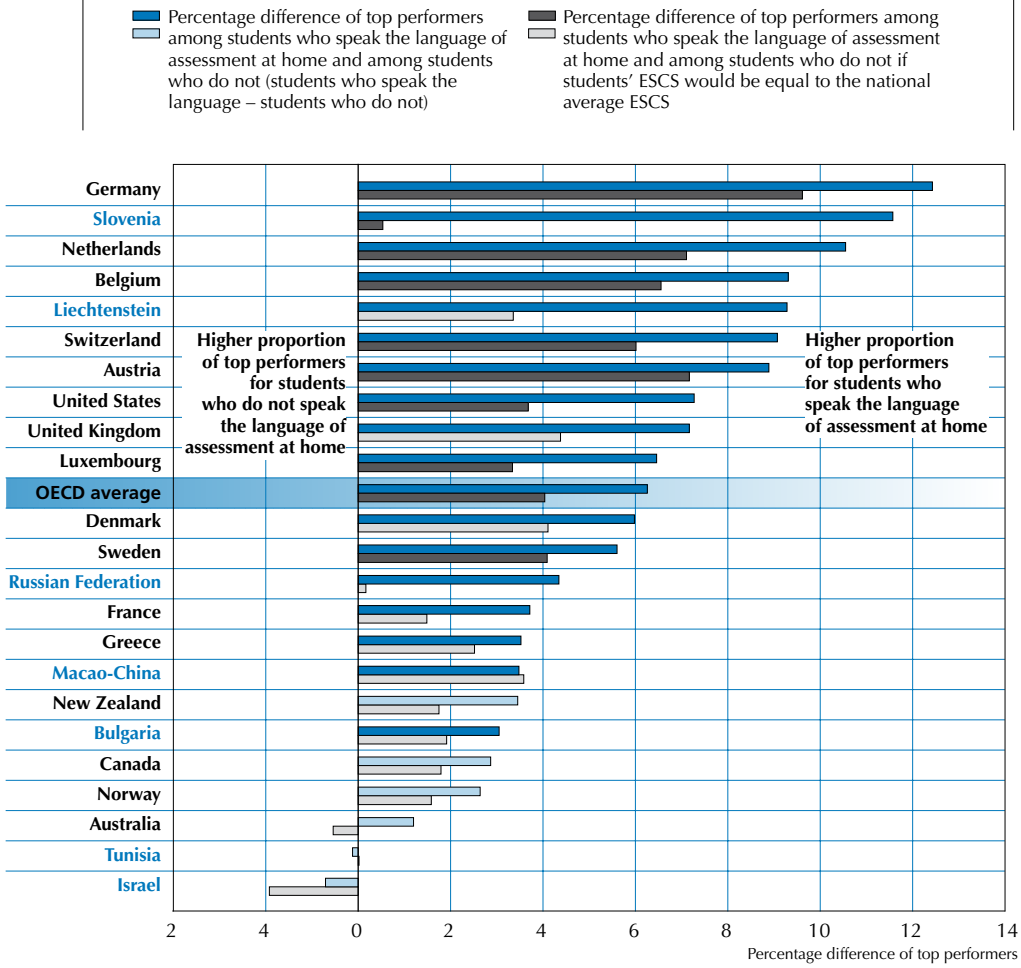
Countries are ranked in descending order of the percentage difference of top performers among native students and among students with an immigrant background.
Note: Significant differences are highlighted with a darker tone.
Source: *OECD PISA 2006 Database,* Table A2.3.

Speaking the national language or an official language recognised by schools is clearly an advantage in learning and testing. In these cases, the student's home language is aligned with the medium of instruction. Thus, it is no surprise that students in homes where a different language is spoken than the national or an official language face additional learning challenges and a smaller proportion of these students tend to be top performers. To a large extent, this pattern follows the distinctions between native students and students with an immigrant background (Table A2.4 and Figure 2.4). In most of the countries with available data there are significantly fewer students that do not speak the language of assessment at home represented among science top performers. The largest differences in favour of both native students and students who speak the language of assessment at home occur in Germany, the Netherlands and partner country Slovenia (Tables A2.3 and A2.4). In Australia, Canada, Norway, New Zealand and the partner countries Israel and Tunisia there are similar proportions of students not speaking the language of assessment at home and students who do speak the language of assessment at home represented among the top performers.

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Figure 2.4
Percentage difference of top performers by language spoken at home



Countries are ranked in descending order of the percentage difference of top performers among students who speak the language of assessment at home and among students who do not.
Note: Significant differences are highlighted with a darker tone.
Source: *OECD PISA 2006 Database,* Table A2.4.

As the evidence presented highlights, some countries succeed better than others in promoting excellence among linguistic and immigrant minorities. There are lessons to be learnt from these countries that may help improve excellence and equity in educational outcomes.

Students' socio-economic background

The PISA *index of economic, social and cultural status (ESCS)*[4] provides a comprehensive measure of student socio-economic background. This index was derived from information comprising the highest educational level of parents, the highest occupational status of parents, and possessions in the home (see Box 2.1 for further information on PISA indices). The PISA data from all three administrations to date have shown that socio-economic background and performance are closely related.

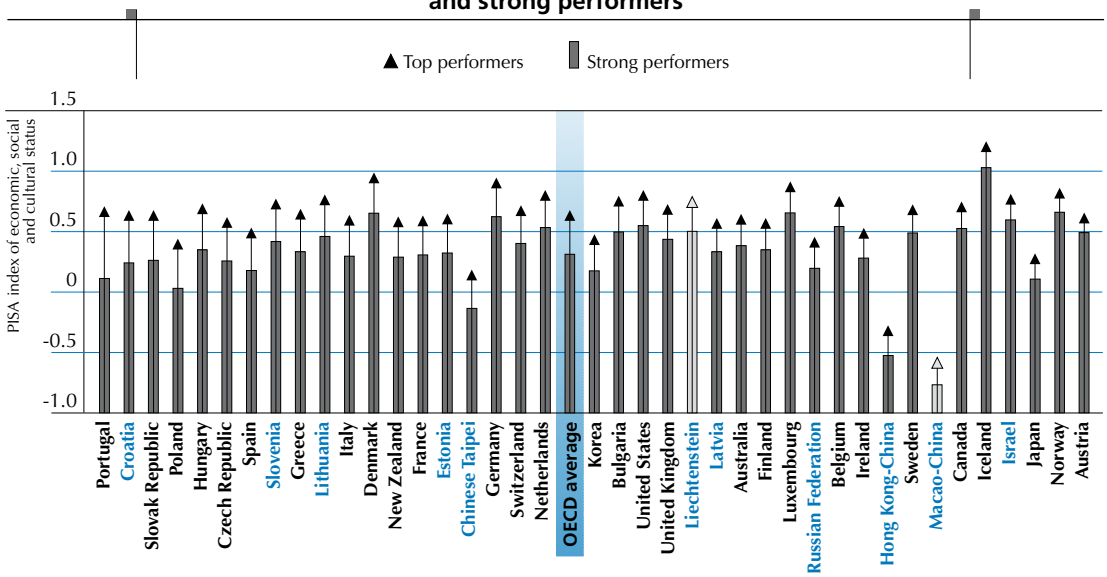


Box 2.1 **Comparing top performers with other students using PISA indices**

This report compares top performers with students from other performance groups using a range of different measures, known as PISA indices. Students completed a questionnaire on themselves and their learning. The information reported by students is summarised into several PISA indices. On each index, the average OECD student was given an index value of zero and about two-thirds of the OECD student population were given index values between -1 and 1 (*i.e.* the index has a standard deviation of 1). It is therefore possible to have both negative and positive mean index values. It should be noted that when a performance group has a negative mean index value, this does not necessarily mean that students in that group responded negatively to the underlying questions, but rather that these students responded less positively on average to such questions compared to students in other performance groups (for more detailed information, see *PISA 2006 Technical Report* [OECD, 2009b]).

Socio-economic background is related to performance for at least two reasons. First, students from families with more educated parents, higher income and greater material, educational and cultural resources are better placed to provide superior educational advantages in the home environment as well as richer learning opportunities outside of the home relative to students from less-advantaged backgrounds. Such families typically are in a better position to provide their children with certain educational experiences that enhance their learning. Second, such families often have much more choice over where they can enrol their children. They may be in a position to choose between public and private schools, and have greater access to schools where the student body is drawn from a more advantaged socio-economic background. Evidence on the extent to which private management of the schools matters is examined in the following section.

Figure 2.5a
Difference in socio-economic background between top performers and strong performers



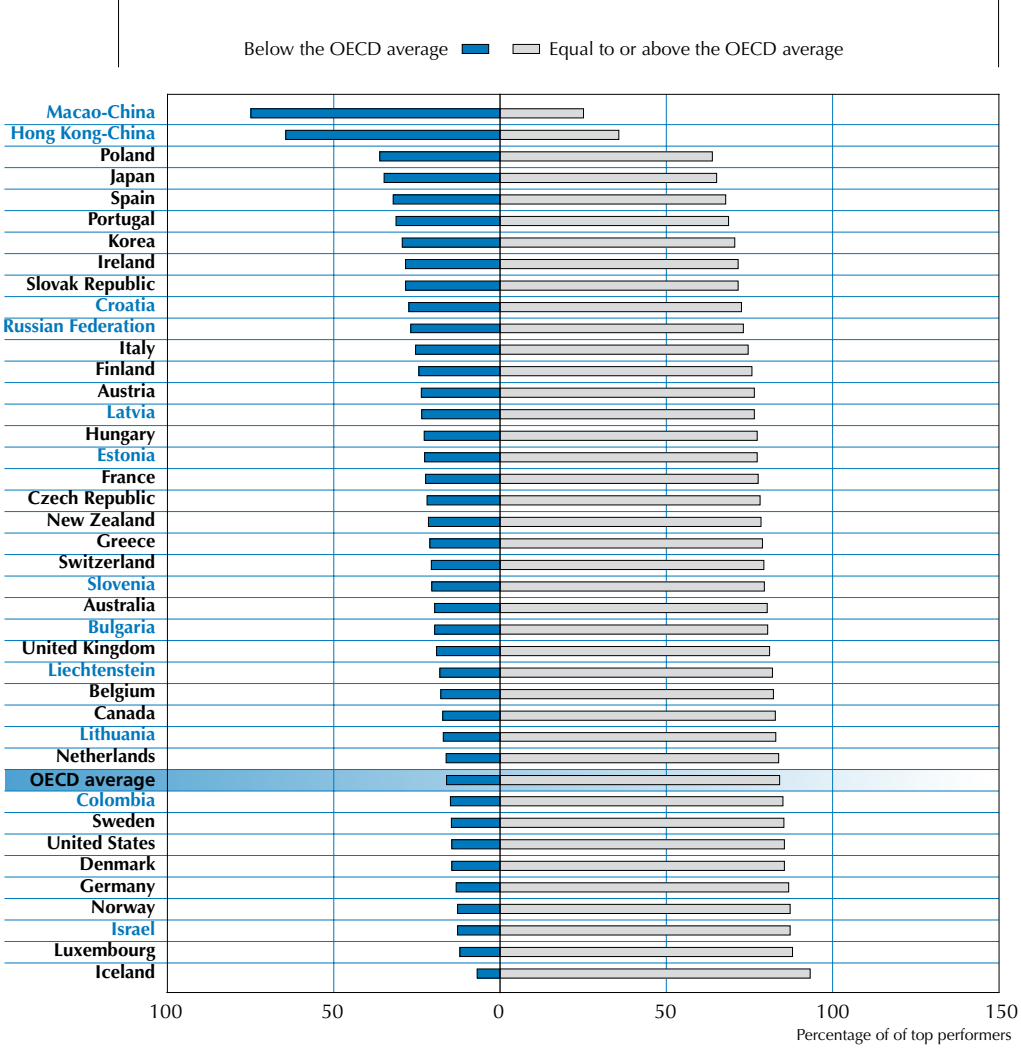
Countries are ranked in descending order of the difference in the PISA index of economic, social and cultural status (ESCS) between the top and the strong performers.
Note: Significant differences are highlighted with a darker tone.
Source: *OECD PISA 2006 Database,* Table A2.5a.



Top performers tend to come from a relatively advantaged socio-economic background. (Table A2.5a). In virtually every country for which there are adequate data, students in the top performing category are drawn from families with comparatively advantaged socio-economic backgrounds, differences that are always statistically significant meaning that they are not likely to be found by chance. Across the OECD, the average socio-economic background of top performers is slightly more than half a standard deviation above the average OECD socio-economic background. Figure 2.5a shows that even when comparing top performers to strong performers (the performance group from which the most likely future top performers might emerge), the differences in socio-economic background in favour of top performers are statistically significant in all OECD countries (on average across the OECD countries the difference is 0.26 of a standard deviation).

Figure 2.5b

Percentage of top performers with socio-economic background (ESCS) "below" or "equal to or above" the OECD average of ESCS



Countries are ranked in descending order of the percentage of top performers with socio-economic background who are below the OECD average.
Source: *OECD PISA 2006 Database,* Table A2.5c.

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That is, top performers tend to come from significantly more advantaged socio-economic backgrounds than students who are not among the top performers, but are closest to reaching those levels. In general, differences in socio-economic background between different performance groups are marked – the more advantaged the socio-economic background, the higher the performance.

Yet, not all top performers come from an advantaged socio-economic background. Figure 2.5b shows more than a fifth of top performers across the OECD countries come from a background below the OECD average. In Poland, Portugal, Spain or Japan the proportion of top performers in science whose socio-economic background is below the OECD average exceeds 30%. That proportion reaches 64% and 75% in partner economies Hong Kong-China and Macao-China respectively (Table A2.5c).

While a disadvantaged background is not an insurmountable barrier to excellence, how much of an obstacle it becomes varies from country to country. Looking at the national average in the typical OECD country about a quarter of top performers in science come from a socio-economic background below the country's average (Table A2.5b). Some systems however are more conducive for students from a relatively disadvantaged background to become top performers in science. For example, in Japan, Finland, Austria, and the partner economies Macao-China and Hong Kong-China, one third or more of top performers come from a socio-economic background more disadvantaged than the average of the country or economy. On the other hand, in Luxembourg, Portugal, Greece, France, and the United States, as well as the partner countries Bulgaria, Israel and Lithuania, 80% or more of top performers come from a socio-economic background more advantaged than the average of the country.

So far, the chapter has shown that top performers in science share some individual characteristics but it also stresses their diversity within and across countries. The next and final section of the chapter turns to the analysis of the characteristics of the schools attended by top performers in science. The evidence in PISA shows that school policies have an impact on performance (OECD, 2007). While a comprehensive analysis of the interactions between school policies and system characteristics is outside the scope of this report, the next section explores the relationship between school policies and students' top science performance.

WHICH SCHOOLS DO TOP PERFORMERS IN SCIENCE ATTEND?

PISA 2006 collected school data through a survey of school principals. Caution is required in interpreting these data. Science learning in schools depends upon the entire cumulative experience over many years; not just what individual students learned in the current school environment, but also previous schooling and experiences outside of school.

A great deal of information is available in PISA about teaching and learning experiences at the school level. It is therefore worthwhile to analyse whether or not these experiences vary for top performers in science and how they relate to the school they attend. For example, are top performers in science concentrated in a few schools or can they be found in every school? Do top performers in science tend to attend schools with high average socio-economic background? What type of schools, public or private, do top performers in science attend? These questions among others are addressed in the remainder of this chapter.

Are top performers in science in schools that only serve other top performers in science?

Figure 2.6 shows the percentage of students in each country who attend schools where there are no top performers in science. It depicts where top performers are spread across schools and where they are concentrated in a few schools. In Finland, Australia, New Zealand, and the partner economy Macao-China,



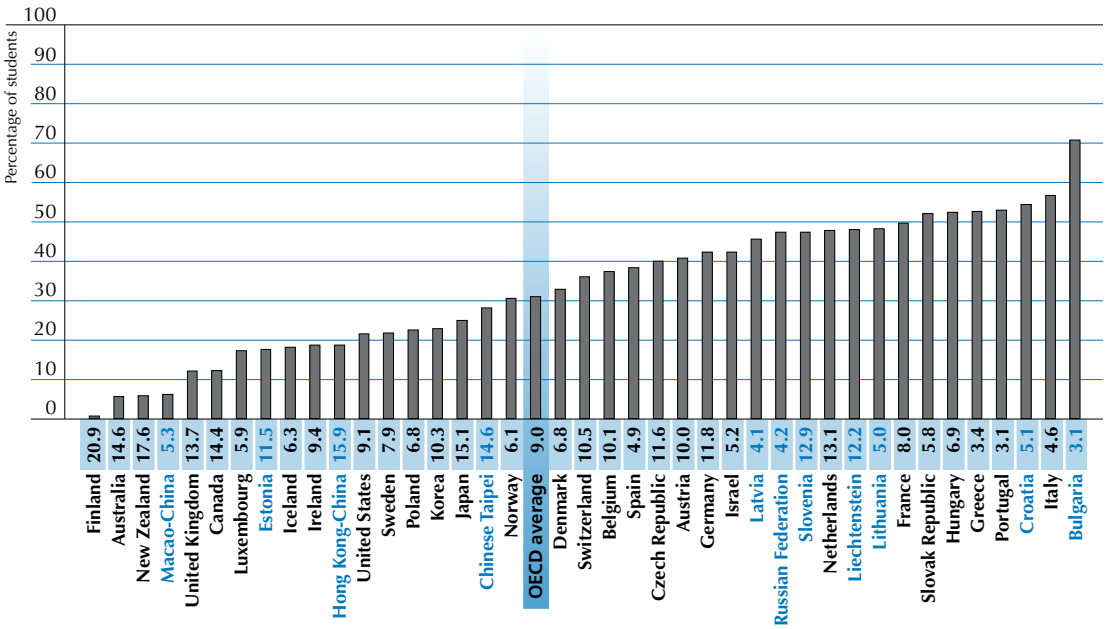
more than 90% of students are in schools attended by top performers, while in Italy, Portugal, Greece, Hungary, the Slovak Republic and the partner countries Bulgaria and Croatia more than half of the students are in schools with no top performers.

How students are grouped into different schools, intentionally or unintentionally, is related to the extent to which top performers are concentrated in schools. For example, although the United Kingdom and the Netherlands have a similar proportion of top performers (13.7% and 13.1% respectively), 88% of students are in schools with top performers in the United Kingdom versus 52% in the Netherlands. However, the evidence also suggests that a concentration of top performers in certain schools is not a pre-requisite for achieving high performance levels. Notably some of the countries with the highest proportions of top performers also show the smallest disparities in average socio-economic background across schools (Figure 2.6).

Table A2.6b shows the school average science performance for the four performance groups of students. It provides a different indicator of the concentration of top performers in schools. Virtually all countries show a pattern where students at higher levels of science performance are attending schools with higher average science performance than students at lower levels of science performance.

The size of the gap in school average performance between performance groups varies considerably from country to country. Across OECD countries the average difference in science scores between schools attended by top performers and schools attended by the lowest performers in science was about 104 points. (Note that the standard deviation of students' science performance is 100 score points).

Figure 2.6
Percentage of students in schools with no top performers



Note: Data on blue background are percentages of top performers.
Source: *OECD PISA 2006 Database,* Table A2.6.

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This gap was much less in Finland (30 score points) and in Iceland, Norway, Sweden and Poland (between 40 and 51 score points). This is consistent with data from PISA 2000, 2003 and 2006 which found that some countries, notably the Nordic countries, show particularly little performance variation between schools (OECD, 2001, 2004, 2007). In contrast, in the Netherlands, Germany, Hungary, France, Austria, the Czech Republic, Belgium and Japan, as well as in the partner countries Slovenia, Bulgaria and Liechtenstein, the difference in school average science performance between top performers and the lowest performers is more than three times this amount (1.5 standard deviations or more, a very substantial difference). For this group of countries, top performers are in schools where the average student is also performing very well.

The general concentrations of top performers in science in high average performance schools can be explained in part by system characteristics. In Finland and the first group of countries, students at different levels of performance are attending schools that are relatively similar in terms of their average science performance. In contrast, for the latter group of countries, top performers tend to be in schools where other students tend to performing well too. Educational systems differ in the extent to which schools are tracked as well as in terms of the age at which students are assigned to different school types.

Further evidence on patterns of excellence is examined in the remainder of this section. The goal is to gain insight into some possible factors contributing to the performance disparities between schools attended by top performers and those attended by the lowest performers. Is there evidence of significant socio-economic differences across schools? To what extent do top performers come from families who choose private education? To what extent do top performers attend schools that select students based on their academic record? These and other factors, such as residential location, may play a role in shaping schooling outcomes. A subsequent section examines more how students' science learning is organised at school.

Differences in socio-economic background across schools

Top performers in science are typically found in schools where the student body on average comes from a more advantaged socio-economic background than schools attended by lower performing students. Table A2.7 provides estimates of average socio-economic background for schools attended by top performers in science and schools attended by the three other performance groups. For example, across OECD countries, the difference in the average socio-economic background of schools attended by top performers and schools attended by strong performers (at the adjacent Level 4 in science) is about 0.15 index points. This difference is particularly small for countries with relatively high proportions of top performers such as Finland, Canada, and New Zealand, where the difference in each of these is 0.09 index points or less. Indeed, in Finland, the difference is 0.03 index points or one-fifth of the average difference for the OECD countries.

Countries with a greater variation of socio-economic backgrounds across schools tend to have particularly pronounced differences in the socio-economic context of schools with top performers and the schools with lowest performers.[5] For example, Finland, one of the countries with the highest (0.91) index of inclusion among OECD countries (2006), is also one of the countries with the smallest difference in average socio-economic background between schools with top performers in science and those with strong performers (0.03 or less than 3% of a standard deviation).

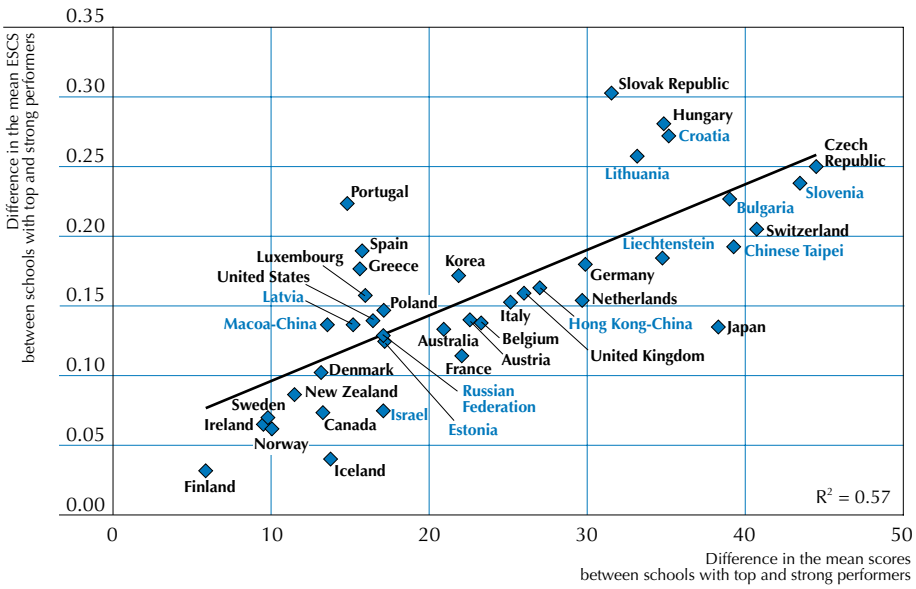
A relatively advantaged socio-economic background at the school level provides students with many benefits. For example, PISA shows a high correlation between schools with a more advantaged socio-economic background and stronger disciplinary climate (OECD, 2004).[6] Schools with a larger proportion of their students from more advantaged backgrounds often provide a learning programme with a more demanding curriculum and instruction. The stronger instructional programme benefits all students in the school, a programme that would not be normally provided to a less-advantaged student body (Levin, 2007).



Such schools will also attract the best teachers who seek teaching environments that are likely to produce high performance. Finally, research shows that schools with greater concentrations of comparatively advantaged socio-economic student populations provide student peers with lofty educational and occupational aspirations, and those attitudes pervade peer interactions and activities and support the general environment of high expected student accomplishments and student futures (Vandenberghe, 2002; Zimmer and Toma, 2000; Hanushek *et al*, 2003).

In fact, PISA shows a strong relationship between the differences in school average performance and the school average socio-economic background when comparing schools with top performers in science and those with strong performers (Figure 2.7). The figure shows that those countries where the differences in socio-economic background are higher tend to be those where the differences in performance are higher as well.

Figure 2.7
Relationship between socio-economic and performance differences between schools with top and strong performers



Source: *OECD PISA 2006 Database*, Table A2.6b and Table A2.7.

Beyond the individual characteristics of their student intake, schools often differ in the involvement of public and private stakeholders in their management, in their admittance, selection and grouping policies, or in the amount of information they provide publicly. The chapter now turns to the analysis of differences in policies among schools attended by different student performance groups.

Do top performers mainly attend schools that are privately managed?

School education is mainly a public enterprise. Nevertheless, with an increasing variety of educational opportunities, programmes and providers, governments are forging new partnerships to mobilise resources for education and to design new policies that allow the different stakeholders to participate more fully and to share costs and benefits more equitably. Private education can be a way of mobilising resources from



a wider range of funding sources. At the same time, publicly financed schools are not necessarily also publicly managed. Instead, governments can transfer funds to public and private educational institutions according to various allocation mechanisms. By making the funding for educational institutions dependent on parents' choosing to enrol their children, governments sometimes seek to introduce incentives for institutions to organise programmes and teaching in ways that better meet diverse student requirements and interests, thus reducing the costs of failure and mismatches. Direct public funding of institutions based on student enrolments or student credit-hours is one model for this. Giving money to students and their families (through, for example, scholarships or vouchers) to spend in public or private educational institutions of their choice is another method.

What type of school (public or private) is associated with high concentrations of top performers? This is a question which requires considerable attention to underlying detail and it is a good example of the kind of careful analysis necessary when studying the impact of school characteristics and policies in students' excellence. For one, the definition of private schools differs from country-to-country, and even the sources of financial support for both types of schools may defy generalisation. For example, in some countries private schools are heavily supported by public funding; in others their funding is strictly from parents and other private sources. In some countries public schools, particularly at the secondary level, charge fees and require other types of family contributions. Thus, the distinctions between public and private schools differ among countries.

The PISA approach is to identify public schools as those managed by a public authority, government agency, or a publicly elected or authorised governing board and private schools as those managed by a non-governmental organisation. According to this definition the average percentage of top performers across the OECD countries is about 9% for public schools and about 14% for private schools. However, an important and coinciding factor compromises the ability to infer potential causation of one type of school having stronger effects on producing top performers relative to the other type of school. The two sectors enrol students from different socio-economic backgrounds (Table A2.8b). It has been shown that both the socio-economic background of individual students and the average socio-economic background of a school are highly related to the science performance of students (OECD, 2007). Thus, it is not appropriate to infer from this limited information on representation of top performers between the two types of schools whether the larger percentage of top performers among private schools is due to differential school effectiveness or differential socio-economic selection.

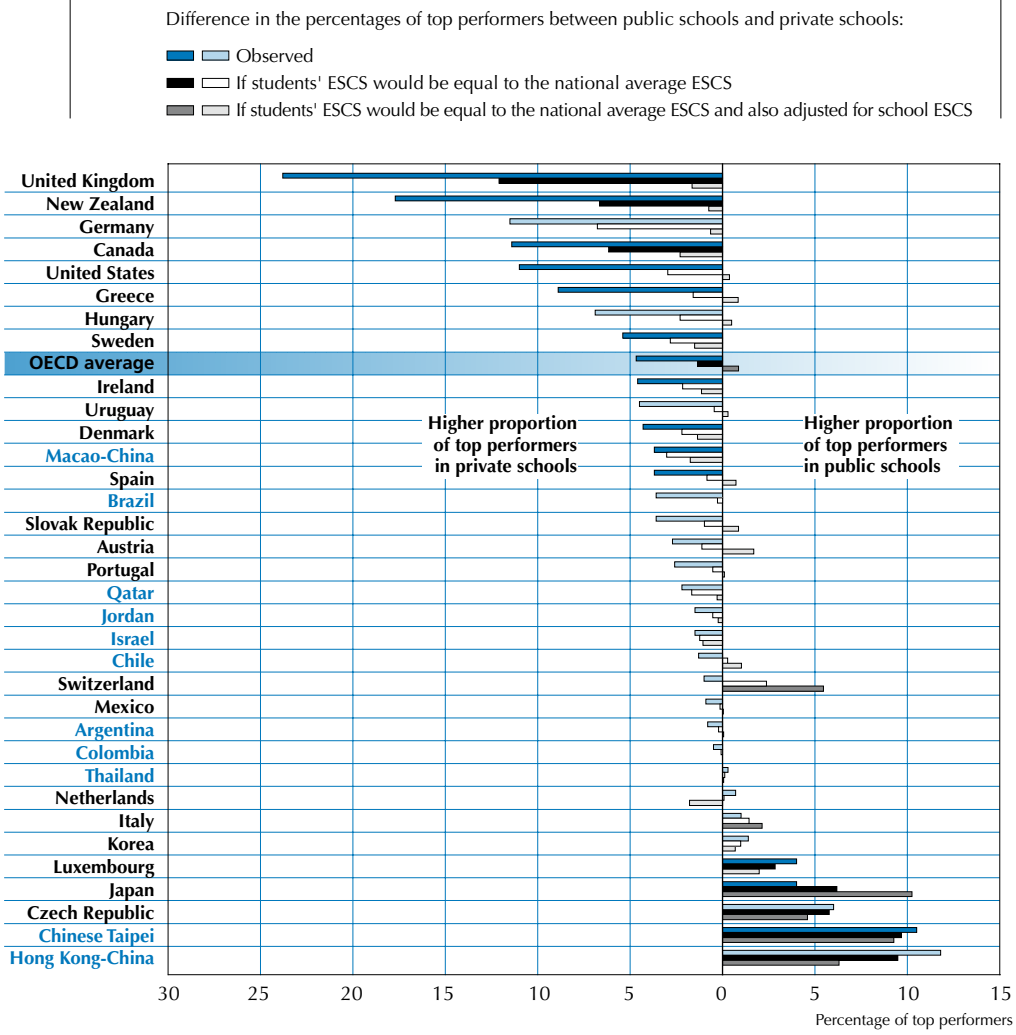
Figure 2.8 shows that in most countries there are larger proportions of top performers in private schools than there are in public schools, but it also shows that there are important exceptions to this rule. A few countries such as Japan, Luxembourg and the partner economy Chinese Taipei show higher proportions of top performers among public school students than among private school students.

In the interpretation of these figures, it is important to recognise that there are many factors that affect school choice. Insufficient family wealth can, for example, be an important impediment to students wanting to attend independent private schools with a high level of tuition fees. Even government-dependent private schools that charge no tuition fees can cater for a different clientele or apply more restrictive transfer or selection practices. One way of attempting to separate out the unique differential impacts of public and private schools on producing top performers in science is to estimate statistically the representation of top performers in each type of school if the socio-economic background of the individual student and the average socio-economic background for the two types of schools were identical. Such a statistical adjustment would make the student populations of the two types of schools comparable in terms of social intake and allow for an assessment of science performance in the two types of schools. Figure 2.8 shows the results after accounting for the student and school socio-economic background.



Looking at the differences between public and private schools without taking account of student and school socio-economic background, it can be observed that a greater proportion of private school students are top performers compared to public school students, with some individual countries being exceptions to this pattern. The average percentage of top performers in private schools across OECD countries is about 14% and in public schools about 9% with a differential in favour of private schools of about 5 percentage points (Table A2.8a and Figure 2.8). However, after an adjustment for differences in the socio-economic intake between public and private schools, there is a small significant advantage to public schools.

Figure 2.8
Top performers in public and private schools



Countries are ranked in descending order of the observed percentage difference between public and private schools.
Note: Significant differences are highlighted with darker tone.
Source: *OECD PISA 2006 Database,* Table A2.8a.

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The evidence presented above implies that on average, across the OECD countries, the differences in proportions of top performers in private and public schools is fully explained by socio-economic differences of individual students and social composition of those schools, and the policies and practices that come with these. Once individual and school socio-economic backgrounds are accounted for, top performers in science are as likely to be found in public or private schools. That said, while the performance of private schools does not tend to be superior once socio-economic factors have been accounted for, in many countries they may still pose an attractive alternative for parents looking to maximise the benefits for their children, including those benefits that are conferred to students through the socio-economic level of schools' intake.

Do top performers mainly attend schools that select students based on their academic record?

Admission and placement policies establish frameworks for the selection of students for academic programmes and for streaming students according to career goals and educational needs. In countries with large performance differences between programmes and schools or where socio-economic segregation is firmly entrenched through residential segregation, admission and grouping policies have high stakes for parents and students. Effective schools may be more successful in attracting motivated students and in retaining good teachers; conversely, a "brain drain" of students and staff risks causing the deterioration of other schools. Moreover, once admitted to school, students become members of a community of peers and adults and the socio-economic context of the school in which students are enrolled tends to be much more strongly related to student learning outcomes than students' individual socio-economic background. Another question that arises with respect to the schools that top performers are attending is how selective such schools are regarding students' previous academic performance. Are most top performers in schools that are highly selective choosing only students who meet strong academic criteria? The PISA 2006 school questionnaire asked school principals about the selection criteria used for their schools. Specifically they were asked to indicate whether the student's academic record is a prerequisite for admission, is given high priority or considered for admission, or is not considered for admission. Table A2.9 and Figure 2.9 show the results for each performance group.

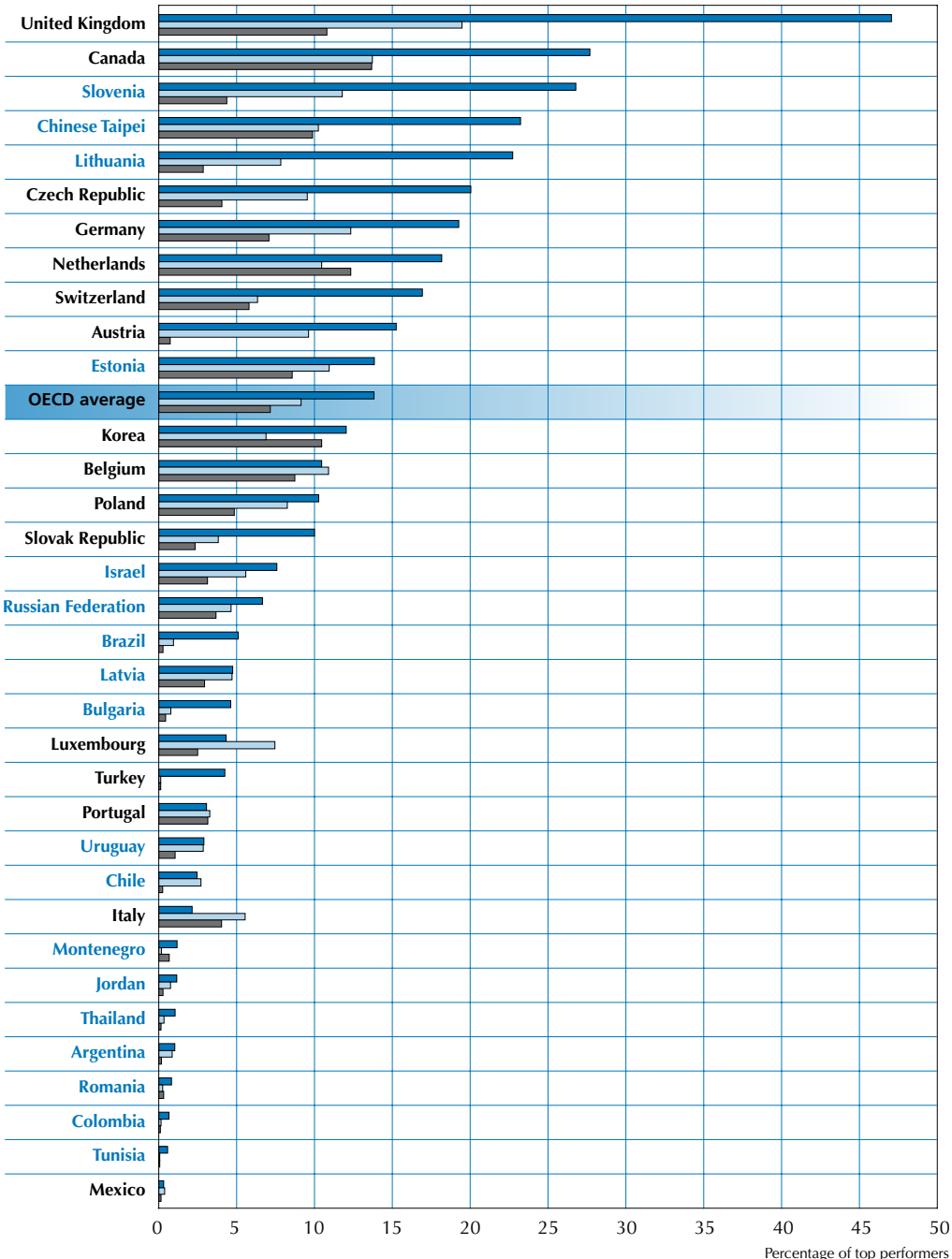
In general, schools where the student's academic record is a prerequisite for admittance have more top performers than schools where it is not. Across the OECD countries on average, of the schools where previous academic records were a prerequisite for admission 14% of the students were top performers, while 25% were strong performers and 46% of students were moderate performers. For schools where previous academic records were not considered for admission only 7% of the students were top performers, while 17% were strong performers and 52% were moderate performers. However, there are large differences among countries along this dimension. For example, in United Kingdom schools using previous academic performance as a prerequisite for admission almost half of the students were top performers (47%). For schools where previous academic records were not used for admission there were 11% of top performers in the United Kingdom. Results for Canada (with its relatively homogeneous distribution of top performers among schools with different average levels of performance) indicate that in schools where previous academic records were used for admission 28% of students were top performers and in schools where previous academic records were not used for admission 14% of students were top performers. Italy is an exception to this general pattern, because the proportion of top performers is higher among schools that do not consider the student's academic record than among those for which it is a prerequisite (Figure 2.9).

It is noteworthy that these differences at the school level are not at the system level. That is, there is no advantage for systems with a higher proportion of students in academically selective schools and the national proportion of top performers in science.[7]



Figure 2.9
Top performers, according to schools' use of selecting students by their academic record

Percentage of top performers in school where students' academic record is:
- "prerequisite" for admittance to school
- "high priority" or "considered" for admittance to school
- "not considered" for admittance to school



Source: *OECD PISA 2006 Database,* Table A2.9.

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IMPLICATIONS FOR EDUCATIONAL POLICY AND PRACTICE

Countries vary significantly in the proportion of students who demonstrate excellence in science performance. Interestingly, scientific excellence is only weakly related to average performance in countries, that is, while some countries show large proportions of both high and poor performers, other countries combine large proportions of 15-year-olds reaching high levels of scientific excellence with few students falling behind. While on average across OECD countries there are more top performers in science who excel also in mathematics but not reading, the proportion that excels in all three subject areas is significantly larger. The variance across countries highlights that different educational systems result in different kinds of top performers.

The talent pool of countries differs not just in its relative and absolute size, but also in its composition. Student characteristics such as gender, origin, language, or socio-economic status are related to top performance in science but none of these student characteristics impose an insurmountable barrier to excellence. It is particularly encouraging that in some education systems significant proportions of students with disadvantaged backgrounds achieve high levels of excellence, which suggests that there is no inevitable trade-off between excellence and equity in education. Interestingly, although in most countries native students are more likely to be high performers than students with an immigrant background, this difference is no longer significant after accounting for students' socio-economic background in half of the countries being compared. Some countries succeed better than others in promoting excellence among linguistic and immigrant minorities. There are lessons to be learnt from these countries that may help improve excellence and equity in educational outcomes.

Notes

1. When interpreting these results, one ought to keep in mind that science performance is accounted for when computing performance in mathematics and reading. For more information see OECD (2009b), *PISA 2006 Technical Report,* OECD, Paris.

2. Given that the cut-off points for top performance differ for each subject area, these findings should be interpreted with caution.

3. Note however that in some countries students from an immigrant background confounds very different groups of students. In some cases, in Ireland for example, about half of the immigrant students report speaking the language of instruction at home; that is they are not Irish but they speak English.

4. For details on the index please refer to pages 332 to 337 of *PISA 2006: Science Competencies for Tomorrow's World, Volume 1 Analysis.*

5. Intra-class correlation coefficient for students' socio-economic background (ESCS) and the differences in the school mean ESCS between schools with top performers and schools with strong performers are strongly related (R^2=0.45).

6. This research also shows that a stronger disciplinary climate is linked to better performance even when controlling for the school and student socio-economic background (OECD, 2004).

7. In 37 countries with available data, the variance in the proportion of top performers across the systems were explained by the proportion of students in academically selective schools (R^2= 0.0075).



3

Experiences, Attitudes and Motivations for Excellence

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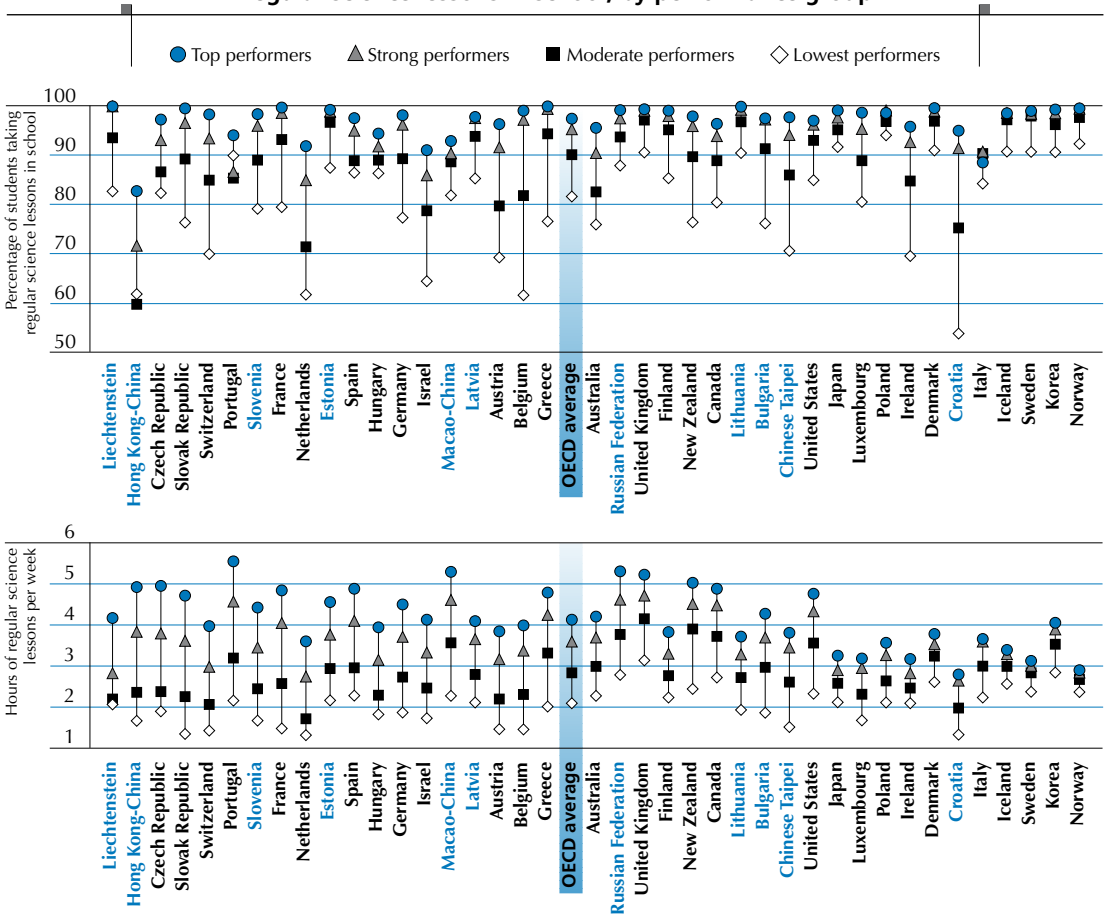
Having looked at individual and school characteristics of top performers in science, this chapter turns to the analysis of student experiences, attitudes and motivations. It investigates differences among performance groups and identifies what characterises top performers in science. The chapter is divided into four sections: The first describes student experiences with science teaching and learning as they relate to top performance; the second analyses the motivations of top performing students; the third reviews the aspirations of top performers in science for a future career in science; and the fourth and final section analyses a particular group of top performers in science, those relatively unmotivated.

HOW DO TOP PERFORMERS EXPERIENCE THE TEACHING AND LEARNING OF SCIENCE?

Do top performers spend more time in school learning science?

Previous analysis has shown that student time spent in regular lessons at school is positively related to student performance (OECD, 2007). It is therefore worth comparing the amount of time top performers in science devote to studying science at school with the time put in by other performance groups, especially strong performers. Figure 3.1a provides information reported by students on the amount of time spent in science lessons at school.

Figure 3.1a
Regular science lessons in school, by performance group



Countries are ranked in descending order of the difference in the hours between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.1a.

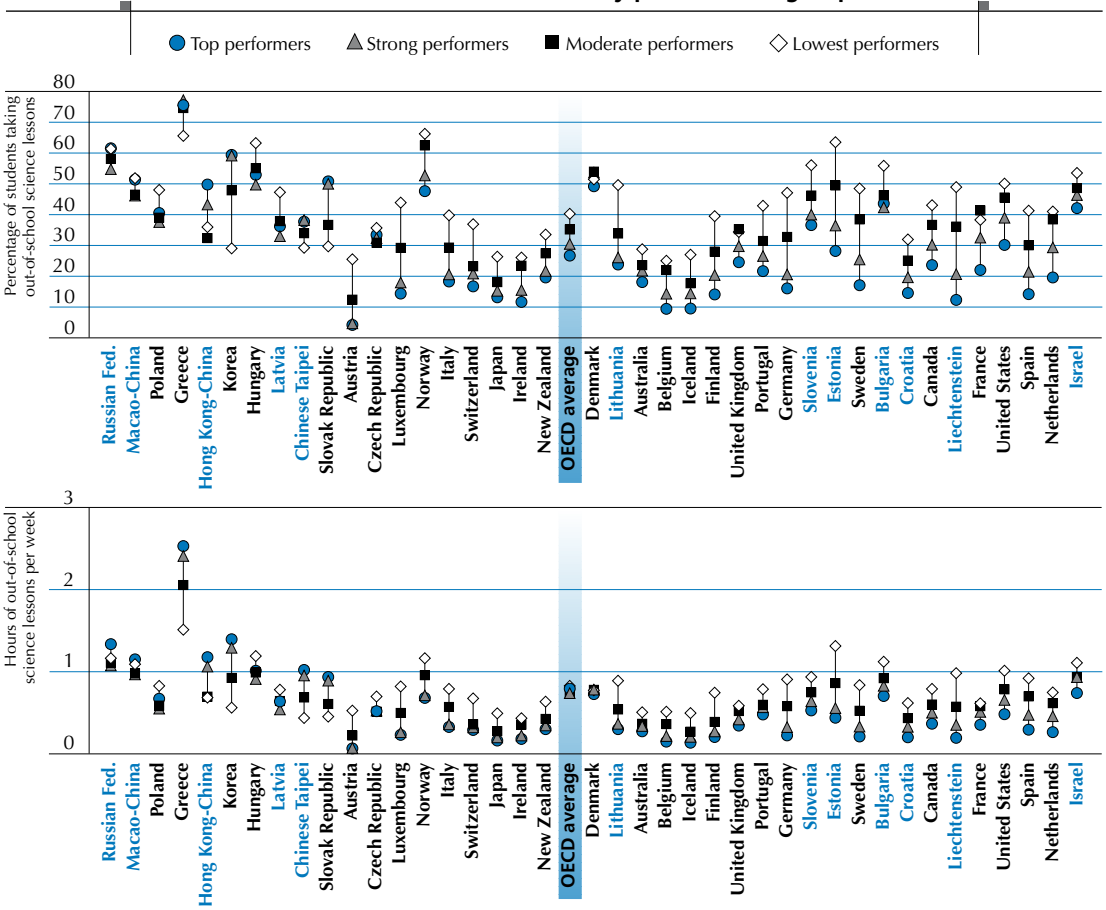
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The figure shows that top performers in science receive more science instruction than any other group. When compared with the lowest performers in science, for the OECD countries, top performers in science receive about two extra hours per week of instruction in science. Top performers in science receive on average four hours of instruction per week and the lowest performers only two. It is possible that students with lower proficiency, gave priority to subjects other than science. Another possibility is that the students themselves are allowed to choose science courses as electives and those who have done poorly in science or do not like science choose to take fewer courses. When compared with strong performers, top performers receive an extra half an hour of instruction per week. This type of difference is even found in countries with the largest proportions of top performers such as Australia, Canada, Finland, Japan and New Zealand. In the Czech Republic, the Slovak Republic, Switzerland and Portugal the top performers received about an hour or more of science per week than the strong performers (Figure 3.1a).

Clearly, in all countries scrutiny should be given to exposure to science as one possible explanation for differences in student outcomes. Moreover, if these differences are found among 15 year olds, it is likely that even larger differences will be found at the older ages where science is most likely no longer compulsory and becomes an elective.

Figure 3.1b
Out-of-school science lessons, by performance group



Countries are ranked in descending order of the difference in the hours between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.1b.

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Do top performers spend more time in science lessons outside of school?

One way in which families might choose to improve the science performance of their children is to obtain assistance through science instruction outside of the school. Such instruction could be used to raise the science performance of students who were doing poorly or to provide additional enrichment for those students who are doing well. For this reason, it is a priori not clear what patterns of out-of-school tuition might be found among the different performance groups.

Figure 3.1b shows that students with lower science performance were generally receiving more out-of-school lessons in science than those with higher performance, although the absolute levels and differences among the performance groups are modest. For the OECD countries, on average, lowest performers were getting about 45 minutes a week of such instruction; at the other end of the scale the top performers were obtaining half an hour or less of such instruction. Thus, although lowest performers are receiving more out-of-school instruction in science, it is only a difference of 15 minutes per week and does not come close to compensating for the additional two hours per week of school instruction in science that the top performers receive on average.

Understanding the nature of out-of-school lessons is important, and this nature may not just vary between students and schools, but also across countries. For example, two important exceptions to the pattern of less time spent on out-of-school science lessons among the top performers are Greece and Korea. In these two countries top performers reported that they were receiving about an hour more of out-of-school science lessons each week relative to the lowest performers (Figure 3.1b).

How do top performers describe their science lessons?

Some approaches to science teaching may prove more effective than others in motivating students, imparting knowledge and engaging students in scientific activities. PISA 2006 attempted to ascertain whether there was a link between particular approaches to science instruction and science outcomes by collecting a very rich set of information on approaches to science teaching. The pedagogical emphasis in recent years has been away from a narrow focus on memorisation toward such instructional approaches as hands-on experimentation, testing of ideas, development of scientific explanations for real-world events and interactions with other students to explore phenomena.

PISA used the student questionnaire to examine student experiences with respect to science teaching and learning. In this respect it developed a rich set of information on the practices of science classes as experienced by students both within and among countries. Although this data has value in itself in considering teaching practices and whether they match desired policies, they apply only to the experience that the students have had in their present schools. Since the relation between these instructional practices and students' scientific proficiencies would have to be assessed by the cumulative effect of practices over the entire schooling experience, and not on the basis of what is usually a single science teacher for one year or less, it is difficult to relate these temporal data to science performance. However, the following section will attempt to describe the instructional techniques reported by students in the four different performance groups.

PISA sought information that enabled the construction of four indices on teaching strategy. These identified whether students were experiencing strategies focused on models or the application of science, or those focused on scientific investigations, on hands-on experiences and on allowing students to discuss their ideas and understandings.

Students ought to understand how science is used to solve specific challenges as well as understanding scientific explanations for familiar phenomena in daily life. Education systems strive to give students insights into how they might use scientific understanding as citizens, workers, inventors, innovators and other potential roles. Table A3.2a and Figure 3.2 show results for the *index of focus on models or applications in*

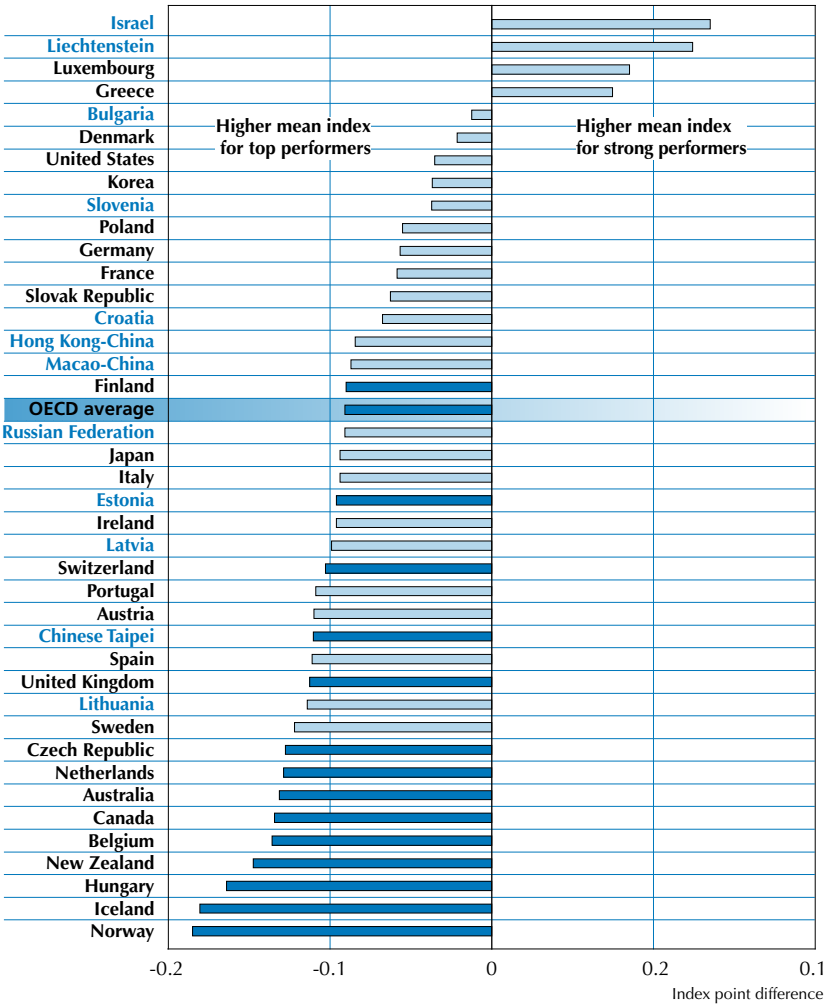


science teaching and learning. This index was calculated using students' responses to questions regarding the teachers' attempt to use examples of technological and scientific applications relevant to students' lives and society as well as how scientific principles can be applied to many different phenomena.

Across OECD countries, there is a modest increase in index values for focus on models or applications in science teaching and learning from about minus –0.05 for lowest and moderate performers, to 0.04 for strong performers and 0.13 for top performers. This increase represents a boost from the lowest to the top levels of performance of about one-fifth of a standard deviation in use of models or applications in science lessons. For individual countries this modest pattern also seems to hold with top performers likely to report more focus on models or applications in their science lessons. In 12 of the 28 OECD countries with sufficient data, more top performers report exposure to models or applications of science in their classes, compared to strong performers.

Figure 3.2

Top and strong performers' perception of the science teaching strategy focus on application



Note: Significant differences are highlighted with a dark tone.
Source: *OECD PISA 2006 Database*, Table A3.2a.

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Students were also asked to indicate the frequency of other types of instruction such as doing scientifically oriented investigations, obtaining hands-on experiences such as practical experiments, and interacting with other students to discuss their ideas and scientific understanding (Tables A3.2b, c and d). In the case of the use of investigation as an instructional strategy, OECD countries' top performers were exposed to less investigation than students at lower levels of science performance. Similarly, top performing students reported lower levels of student interaction in their science lessons.

The interpretation of these results is challenging. It is possible that schools view the traditional approach of focussing on applications as the most effective one for teaching science to high achievers. Also, the more engaged approaches of investigation, hands-on activities and student interactions may be viewed as effective in getting lower achieving students to take a greater interest in science by giving them more freedom to explore and encouraging social interactions with other students. Further inquiry is necessary both to understand the underlying reasons for these patterns of instruction by performance group as well as to understand their consequences. It is possible too that effective teaching and learning takes place with a mix of different types of lessons – including some hands-on activities, some research, some discussion and some teacher-centred lessons.

Do top performers pursue science-related activities?

Engaging in activities outside of school or in conjunction with school activities, students can add to or reinforce their science learning. These activities may be pursued out of curiosity rather than any instrumental intentions for learning. That is, they may simply be entertaining pastimes or vehicles for responding to curiosity or wonder.

The PISA 2006 survey asked students how often they pursued the following activities: watching TV programs about science; obtaining books on scientific topics; visiting websites on scientific topics; listening to radio programs about advances in science; reading science magazines or science articles in newspapers; and attending a science club. For each potential type of science activity, the students were requested to indicate the frequency of engagement: very often, regularly, sometimes, or never or hardly ever. These responses were constructed into the *index of students' science-related activities*.

In the initial analysis of PISA 2006 data, it was found that across countries only a minority of students reported that they regularly or very often engaged in science-related activities. Results indicate that print and television media have the most influence over students in communicating information about science beyond the classroom (OECD, 2007).

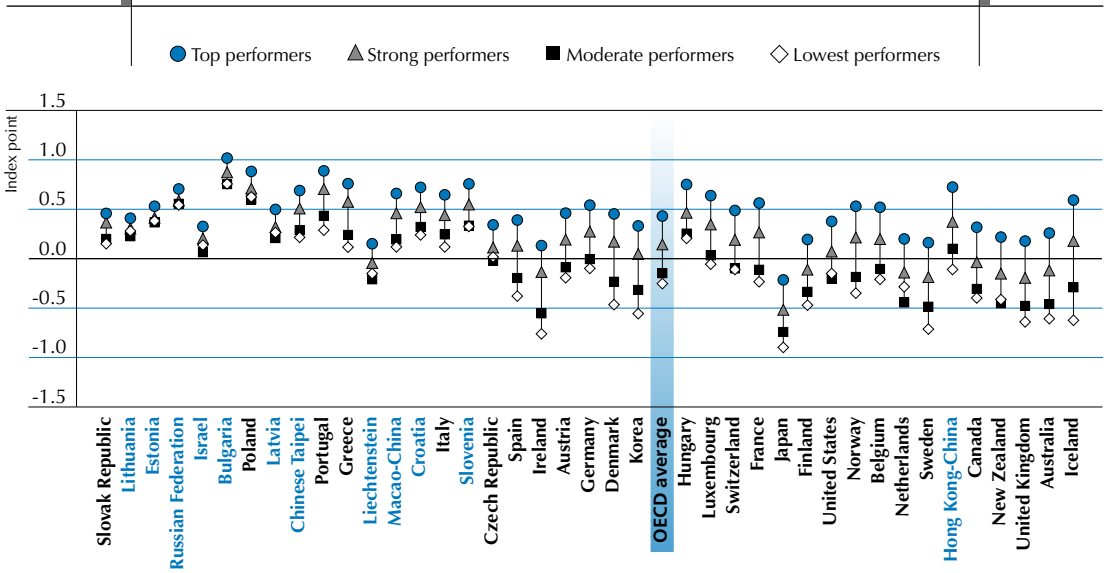
Top performers in science engage in science-related activities relatively more often than any other performance group. In particular, on average across the OECD countries, 38% reported reading science magazines or science articles in newspapers regularly or very often and 32% reported watching TV programmes about science regularly or very often. Only 13% and 18% of lowest performers reported engaging in these activities. Compared to students in the other performance groups, slightly higher percentages of top performers reported visiting websites about science topics (21%) or borrowing or buying books on science topics (14%) regularly or very often. The other science-related activities that students were asked about were not very popular as regular activities: less than 10% of students in each of the four performance groups reported listening to radio programmes or attending science clubs regularly or very often, on average across the OECD countries (Table A3.3b).

Overall, there is a strong and direct relationship between science performance and frequency of participation in student-initiated science activities in each of the OECD countries. Figure 3.3 shows results for each of



the performance groups on the *index of science-related activities*. Across the OECD countries on average top performers were almost two thirds of a standard deviation above the lowest performers in participating in these activities, a large difference. Also, top performers were a quarter or more of a standard deviation above the strong performers, a difference that is moderately large and statistically significant. Significantly more top performers than strong performers reported pursuing science-related activities on a regular basis in all countries, except Greece, the Slovak Republic, and the partner countries Bulgaria, Israel, Liechtenstein, Lithuania and the Russian Federation.

Figure 3.3
Student science-related activities, by performance group



Countries are ranked in ascending order of the difference in the mean index between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.3a.

Because they mostly take place outside of the school environment, some of these science activities are likely to be associated with students' socio-economic background. Given the strong link between science performance and socio-economic status, it is possible that the observed relationship between student performance and student-initiated science activities is confounded by the fact that both are related to students' socio-economic background. Accordingly, an adjustment was made for students' socio-economic background it was found that all countries, for which there are adequate data, except the partner economy Macao-China, continue to show a statistically significant difference between top performers and strong performers. Even after adjusting for students' socio-economic background, the top performers are a quarter of a standard deviation above the strong performers in student-initiated science activities across the OECD countries. Given the large statistical impact of socio-economic background on student performance, it is rather remarkable that student-initiated science activities continue to maintain such a strong statistical relationship with performance after adjustment for socio-economic background.

Several interpretations are plausible for these results. One possibility is that some of the top performers in science excel because of their active participation in science-related activities outside of school. An alternative explanation is that some of the top performers have a greater interest in science and ability



to understand scientifically-based events outside of the school and therefore they are likely to report undertaking these activities more frequently. Policy makers may explore ways of encouraging all students to engage in science-related activities outside of school with the aim of helping strong performers to excel and become top performers, in turn improving the average science performance of all students.

As part of the PISA 2006 assessment, 16 countries complemented the perspectives of students and school principals with data collected from parents.[1] PISA asked students' parents how often their child would have done the following things when the child was about 10 years old: watched TV programmes about science; read books on scientific discoveries; watched, read or listened to science fiction; visited websites about science topics; and attended a science club. From these six questions, an index was constructed to measure students' activities related to science at age 10. In ten of the 16 countries and economies, Iceland, Portugal, Luxembourg, New Zealand, Korea, Italy, Denmark, Germany, and the partner countries and economies Hong Kong-China and Croatia, the parents of top performers reported that their children had done these science-related activities more frequently than did the parents of strong performers (Table A3.3c).

ARE TOP PERFORMERS ENGAGED AND CONFIDENT SCIENCE LEARNERS?

Student experiences and dedication are important drivers of performance and so are student attitudes and motivations. To what extent do the top performers in science enjoy learning science at school? How interested are they in different science topics? Do they generally have fun in their science lessons? Further, are they motivated to do well in science? This section examines evidence collected by PISA from students on these issues.

Which science topics are top performers interested in?

Interest in a subject can influence the intensity with which a student engages in learning. To measure students' general interest in science and their interest in specific science topics in PISA 2006 they were asked a set of questions on: their level of interest in several different subjects, including human biology, astronomy, chemistry, physics, the biology of plants and geology; their general interest in the ways in which scientists design experiments; and their understanding of what is required for scientific explanations. Students could give one of the following answers: "high interest", "medium interest", "low interest" or "no interest". Interested students are those reporting either high or medium interest in the given topics. An *index of general interest in science* was calculated using the responses to these questions.

Initial analysis of the PISA 2006 results showed that while the majority of students across the OECD countries (68% on average) reported an interest in human biology, there was less interest in astronomy, chemistry, physics, the biology of plants and the ways in which scientists design experiments (between 46 and 53% on average). Even smaller proportions of students reported interest in what is required for scientific explanations and in geology (36 and 41% on average, respectively). Is this also the case among top performers in science?

Top performers in science show higher levels of interest in science than any other group, including strong performers. When comparing levels of interest reported by students in the different performance groups, top performers in science were much more likely to show a general interest in science compared to other students, including even the strong performers (index values of 0.45 and 0.21, respectively, on average across the OECD countries). Differences between the top performers and the strong performers were observed in all OECD countries except Greece and the Slovak Republic (Table A3.4a).

At least 50% of top performers on average across the OECD countries reported being interested in all the science topics they were asked about (Table 3.1). On average across the OECD countries, 77% of the top performers reported interest in human biology, this figure being over 80% of the top performers in Greece, France, Ireland, Belgium, the United Kingdom, Poland, Italy and Germany, as well as in the partner



countries and economies Hong Kong-China, Lithuania, Bulgaria, Croatia and Macao-China. Top performers were comparatively less interested in the biology of plants (56% on average across the OECD countries), although 71% of the top performers in France were interested in this. Chemistry was also of interest to the majority of top performers across the OECD (72% on average) and particularly in Portugal, France, Norway, Canada and Luxembourg (at least 80% of top performers). Sixty-nine percent of top performers on average across OECD countries were interested in physics, with the highest percentages in France (85%) and Norway (84%). Contrary to the OECD average percentages, therefore, the top performers in PISA report high levels of interest in not just human biology, but also chemistry and physics.

Table 3.1
Interest in different science topics and enjoyment of science

Average percentage of students by performance group in OECD countries reporting high or medium interest in the following:				
Interest in different science topics	**Lowest performers**	**Moderate performers**	**Strong performers**	**Top performers**
	%	%	%	%
Human biology	56	67	74	77
Topics in chemistry	37	45	59	72
Topics in physics	39	44	57	69
Topics in astronomy	36	50	62	67
Ways scientists design experiments	38	43	50	58
The biology of plants	38	44	51	56
Topics in geology	29	37	47	52
What is required for scientific explanations	29	32	41	51
Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with the following:				
Enjoyment of learning science	**Lowest performers**	**Moderate performers**	**Strong performers**	**Top performers**
	%	%	%	%
I enjoy acquiring new knowledge in science.	49	62	78	87
I am interested in learning about science.	46	57	73	85
I generally have fun when I am learning science topics.	48	57	72	83
I like reading about science.	33	43	60	75
I am happy doing science problems.	30	37	53	68

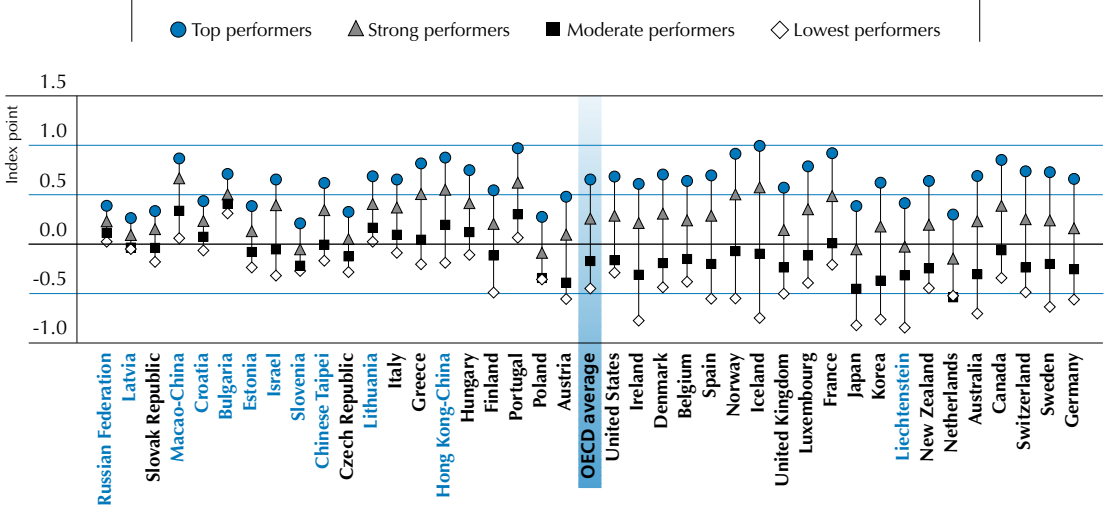
Do top performers enjoy learning science?

Initial PISA 2006 results indicated that in general students enjoy learning science (OECD, 2007). However, do the levels of enjoyment reported by students vary among the performance groups? Figure 3.4 and Table 3.1 present the results for the *index of enjoyment of science* for each of the performance groups. To measure students' enjoyment of science in PISA 2006, students were asked to indicate their level of agreement with five statements: *i)* I enjoy acquiring new knowledge in science; *ii)* I am interested in learning about science; *iii)* I generally have fun when I am learning science topics; *iv)* I like reading about science; and *v)* I am happy doing science problems. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. The *index of enjoyment of science* was calculated from students' answers to these questions.

Top performers in science show particularly high levels of enjoyment of science. The results show a high degree of divergence in enjoyment of science among the performance groups with top performers reporting much greater levels of enjoyment of science than those at lower levels of performance. For example, over 80% of the top performers reported that they enjoy acquiring new knowledge in science, are interested in learning about science and generally have fun when learning science. However, this was the case for less than 50% of the lowest performers (Table 3.1).



Figure 3.4
Enjoyment of science, by performance group



Countries are ranked in ascending order of the difference in the mean index between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.5a.

Top performers also seem to enjoy a learning challenge: 68% on average across the OECD countries reported that they are happy doing science problems. The corresponding figure for strong performers was only 53%. Indeed, top performers reported higher levels of enjoyment of science than strong performers in all countries (differences were in the range of 17% to 49% of a standard deviation [Table A3.5a]) except the partner countries Bulgaria and the Russian Federation. Furthermore, science enjoyment and engagement in science-related activities are highly correlated in most countries (Table A3.5a).

The conclusion is that enjoyment of science has a close relationship to science performance whether as a cause or consequence. To the degree that enjoyment is at least partially a cause of student proficiency in science, it would seem that countries should set a high priority on exploring and designing strategies to enable students to enjoy science.

How important is it for top performers to do well in science

Top performers both enjoy learning science at school and are interested in core science subjects. But do they value science? How important is it for top performers to do well in science?

Top performers in science report being motivated to learn science because they believe it will help them with their future studies or career. Table 3.2 summarises the results for the average percentages of students on statements concerning their *instrumental motivation to learn science*. Values on the index were calculated from students' levels of agreement with each of five statements (see Table 3.2). On average across the OECD countries, the majority of top performers reported that they study science because they know it is useful for them (81%), because what they learn will improve their career prospects (76%) or they need it for what they want to study later on (70%). There were marked differences in levels of instrumental motivation to learn science reported by top performers and by students in the other performance groups. There were significant differences between top performers and strong performers in all OECD countries except Greece and Portugal (Table A3.6a and b).



Table 3.2
Instrumental motivation to learn science and the importance of doing well in science

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with the following:

Instrumental motivation to learn science	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
I study science because I know it is useful for me.	55	62	73	81
Studying my science subject(s) is worthwhile for me because what I learn will improve my career prospects.	52	56	67	76
Making an effort in my science subject(s) is worth it because this will help me in the work I want to do later on.	58	58	66	75
What I learn in my science subject(s) is important for me because I need this for what I want to study later on.	51	50	58	70
I will learn many things in my science subject(s) that will help me get a job.	51	52	59	67

Average percentage of students by performance group in OECD countries reporting that it is VERY IMPORTANT to do well in each subject:

The importance of doing well in science	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
Mathematics	50	54	60	65
Science	20	23	34	47
Reading	55	54	49	43

The proportion of top performers in science reporting that doing well in science is very important to them can be an indicator of the academic importance of science to students, beyond whether the subject is of interest to them or whether they enjoy their science lessons. Taken together with the degree of importance they attribute to mathematics and test language subjects, this can also indicate the relative importance of science to top performers. Students were asked to report how important it is in general for them to do well in science, mathematics and test language subjects. They could give one of four possible answers: "very important", "important", "of little importance" or "not important at all".

Table 3.2 shows that among science top performers, the most important subject for them to do well in is mathematics. Across the OECD countries, 65% of science top performers on average reported that doing well in mathematics is very important to them. This compared with 47% indicating that science is very important to them and 43% indicating that test language subjects were very important to them. Moreover, science is of relatively less academic importance than the other two subject areas to students in other performance groups. At least 50% of lowest performers and the moderate performers report that it is very important for them to do well in mathematics and in test language subjects, but the equivalent percentages for science was just over 20%, on average across the OECD countries. Countries with the largest proportions of top performers reporting that doing well in science is very important to them include Portugal (79%), Spain (70%), Greece (65%),[2] Iceland (63%), France (61%), the United States (61%) and Canada (60%) (Table A3.7).

An implication of this evidence is that the pool of talent for future science workers may be increased by seeking to raise strong performers' motivation to learn science – that is, concentrating on those just below top performers. It may be particularly productive to show students that learning science is useful for further study and that opportunities exist for rewarding careers in science.



Are top performers confident learners?

PISA has shown that confidence is strongly linked with performance at the student level. The evidence presented below shows that top performers in science are very confident learners, more so than any other performance group.

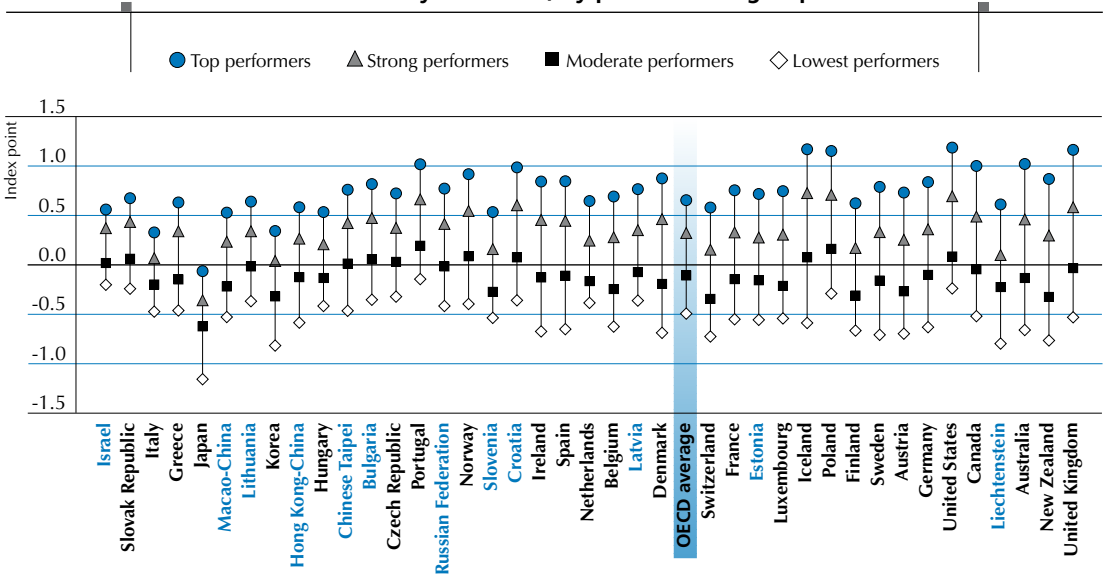
Self-efficacy in science

For these reasons, PISA 2006 included measures of how much students believe in their own ability to handle tasks effectively and overcome difficulties (the *index of self-efficacy in science*). Successful learners are not only confident of their abilities. They also believe that investment in learning can make a difference and help them to overcome difficulties. By contrast, students who lack confidence in their ability to learn what they judge to be important and to overcome difficulties may not find success, not only at school, but also in their adult lives.

Self-efficacy goes beyond how good students think they are in subjects such as science. It is more concerned with the kind of confidence that is needed for them to successfully master specific learning tasks, and is therefore not simply a reflection of a student's abilities and performance. The relationship between students' self-efficacy and students' performance may well be reciprocal; with students with higher academic ability being more confident and higher levels of confidence, in turn, improving students' academic ability. A strong sense of self-efficacy can affect students' willingness to take on challenging tasks and to persist in tackling them.

To assess self-efficacy in PISA 2006, students were asked to rate the ease with which they believe they could perform eight scientific tasks relating to such issues as earthquakes, health, labelling of food items, the effect of changes to the environment on the survival of certain species, garbage disposal, treatment of diseases, acid rain and life on Mars.

Figure 3.5
Self-efficacy in science, by performance group



Countries are ranked in ascending order of the difference in the mean index between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.8a.



As in previous surveys (OECD, 2001 and 2004), in PISA 2006 self-efficacy was strongly related to student performance with an average increase of 38 score points for each one standard deviation increase in the index score.

Top performers in science demonstrated a much higher degree of self-efficacy than even strong performers (index values of 0.77 and 0.36, respectively), on average across the OECD countries. This difference was significant and it was also significant in all countries (Figure 3.5 and Table A3.8a).

Self-concept in science

Students' academic self-concept is both an important outcome of education and a trait that correlates strongly with student success. Belief in one's own abilities is extremely relevant to successful learning. Self-concept in science the general level of belief that students have in their academic abilities as opposed to self-efficacy which measures students' level of confidence in tackling specific scientific tasks.

On average, across OECD countries, 65% of students in PISA 2006 reported that they could usually give good answers in science tests, but only 47% reported that science topics were easy for them. Student self-concept was strongly associated with performance – there was a 27 score point difference associated with a change of one standard deviation on the self-concept index (OECD, 2007).

Table 3.3 shows the average percentages of students in each performance groups agreeing or strongly agreeing with self-concept in science statements. Top performers reported strong self-concept in science with at least 80% of top performers on average across the OECD countries reporting that they can usually give good answers to test questions on science topics, that they understand very well the science concepts they are taught and that they learn science topics quickly. In all OECD countries, top performers reported significantly stronger self-concept in science than strong performers (Table A3.9a). An illustration of this is that while 70% of the top performers reported that science topics are easy for them, this was the case for only 55% of strong performers, on average across the OECD countries (Table 3.3).

In summary, the PISA 2006 results indicate that there is a significant difference between top performers and strong performers regarding their perception of themselves as science learners. Strong performers are comparatively less confident, both in terms of their confidence to tackle science tasks and their assessment of their own abilities in science lessons. While it is difficult to determine the direction of the relationship between confidence and good performance – that is, whether students report being more confident as science learners because they obtain higher marks in science or whether the reverse is true – PISA results show that top performers on average are very confident science learners. To what extent could strong performers improve their performance if they had increased confidence in their abilities to tackle science? Further research is required to shed light on this complex relationship.

Table 3.3
Self-concept in science

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with the following:

Self-concept in science	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
I can usually give good answers to test questions on science topics.	49	60	76	87
When I am being taught science, I can understand the concepts very well.	44	53	69	82
I learn science topics quickly.	41	50	66	80
I can easily understand new ideas in science.	42	49	65	79
Science topics are easy for me.	36	40	55	70
Learning advanced science topics would be easy for me.	42	39	52	68



ARE TOP PERFORMERS INTERESTED IN CONTINUING WITH SCIENCE?

Despite their young age, it is informative to examine the extent to which top performers in science report that science is of value to them, that they are confident in tackling various science tasks and the extent to which they aspire to use science in the future, either through further studies or in their future careers. Equally informative are their reports on how well they feel that school has prepared them for future science careers, and indeed, how well informed they feel about potential science-related careers. All of these measures can shed light on how many 15-year-olds are well placed to continue with science in terms of their abilities, their aspirations and their access to information on how to achieve their goals.

Do top performers perceive science to be of value?

The PISA 2006 results paint an encouraging picture of young people's value of science in general (OECD, 2007). However, students' reports also indicate that they do not necessarily relate science to their own lives or behaviour. For example, while 87% of students in the OECD on average report that science is important to society, only 57% report that science is very relevant to them.

Table 3.4 shows the average percentages of agreement for each performance group on statements about two PISA measures: on *general value of science* and *personal value of science*. Index values were calculated using students' levels of agreement with each of the 10 statements. On average across the OECD countries, at least 80% of top performers reported agreement with 7 out of the 10 statements relating to the value of science. Of particular note, in relation to the personal value of science, 80% of top performers reported that they will use science in many ways as an adult and 76% reported that science is very relevant to them and that there will be many opportunities to use science when they leave school. These percentages are substantially higher than for the other performance groups, notably lowest performers, but there are significant differences even between top performers and strong performers in nearly all the OECD countries (Tables A3.10a and b and A3.11a and b).

Table 3.4
General and personal value of science

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with each statement:				
General value of science	**Lowest performers**	**Moderate performers**	**Strong performers**	**Top performers**
	%	%	%	%
Science is important for helping us to understand the natural world.	85	93	96	97
Advances in science and technology usually improve people's living conditions.	80	92	96	96
Science is valuable to society.	75	86	92	95
Advances in science and technology usually help improve the economy.	68	79	86	89
Advances in science and technology usually bring social benefits.	63	74	79	81

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with each statement:				
Personal value of science	**Lowest performers**	**Moderate performers**	**Strong performers**	**Top performers**
	%	%	%	%
I find that science helps me to understand the things around me.	63	71	82	89
I will use science in many ways when I am an adult.	53	59	70	80
Science is very relevant to me.	46	51	64	76
When I leave school there will be many opportunities for me to use science.	49	54	65	76
Some concepts in science help me see how I relate to other people.	61	59	58	60



Do top performers intend to pursue science?

One aspect of a good science education is to draw talented students into a future commitment to the field so that as adults they will contribute to the scientific progress and productivity of their societies. PISA 2006 sought to ascertain students' aspirations with regard to study beyond secondary school and active involvement in scientific careers or projects.

Top performers in science often aspire to a science career. Figure 3.6 shows results for students in each performance group on *the index of future-oriented science motivation*. Index values were calculated using students' levels of agreement with each of four statements. These statements are displayed in Table 3.5 with the average percentages of students agreeing or strongly agreeing with them. On average across the OECD countries, 61% of top performers reported that they would like to work in a career involving science and 56% reported that they would like to study science after secondary school. In contrast, top performers showed less enthusiasm for working on science projects as an adult or spend their life doing advanced science (47% and 39% on average across the OECD countries, respectively).

Table 3.5
Motivation to use science in the future

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with each statement:

Future-oriented science motivation	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
I would like to work in a career involving science.	27	30	45	61
I would like to study science after secondary school.	21	23	39	56
I would like to spend my life doing advanced science.	17	15	24	39
I would like to work on science projects as an adult.	20	19	31	47

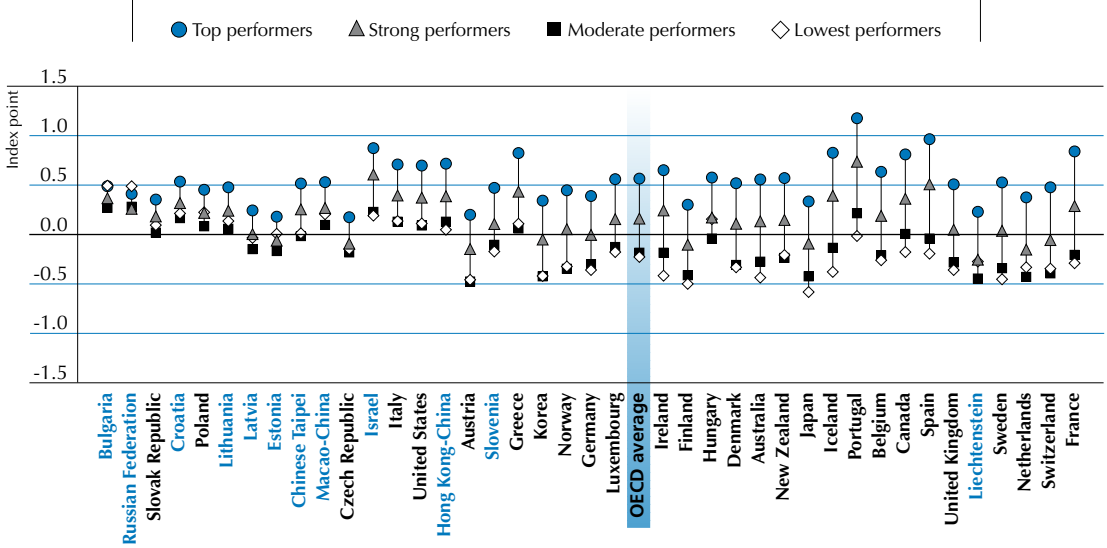
Whether the desire to pursue science is driving the performance of top performers or not is difficult to ascertain. However, as Figure 3.6 shows, the level of aspiration to engage in future scientific activities and involvement by students was positively related to students' science performance. Among the OECD countries the difference in the index of future-orientation towards science between top performers and the lowest performers was more than three quarters of a standard deviation. Only 27% of the lowest performers reported that they would like to work in a career involving science, across the OECD countries on average. Particularly instructive is the fact that the gap between top performers and the strong performers among the OECD countries is 40% of a standard deviation, a substantively large difference between the two adjacent performance groups. For example, on average across the OECD countries only 39% of the strong performers reported that they would like to study science after secondary school – this compares to 56% of top performers. These differences in the index value between top performers and strong performers are observed in all OECD countries except the Slovak Republic, most in the order of 22% to 54% of a standard deviation (Table A3.12a).

The evidence presented above suggests that those countries that are able to increase the proportion of top performing students in science are enlarging the pool of students who have stronger aspirations for future science study and activity. If this indicator is predictive of actual study and career choice, it can be expected to translate into more adults who are prepared for and desire to enter scientifically-oriented occupations.

In the past, females have been much less likely to choose scientific study and science careers than males. It is therefore instructive to compare future-oriented science aspirations according to gender. Table A3.12b shows future-oriented science aspirations by gender.



Figure 3.6
Future-oriented motivation to learn science, by performance group



Countries are ranked in ascending order of the difference in the mean index between top and strong performers.
Source: *OECD PISA 2006 Database,* Table A3.12a.

In general, females indicate lower aspirations than males to engage in future scientific activities. For example, among top performers males have an index value of 0.61 on the aspirations scale in contrast to the female index value of 0.47 on average across the OECD countries. The difference between genders is statistically significant. Of the 28 OECD countries included in this comparison, 12 showed that male top performers in science had significantly higher aspirations to use science in the future than females. Only in the Czech Republic and Poland did female top performers report higher aspirations to use science in the future than male top performers (Table A3.12b).

Yet, the overall aspiration pattern among science top and strong performers is the same for both males and females. As is the case for males, female top performers report higher aspirations to use science in the future than female strong performers. So, the goal of increasing the numbers of adults engaged in the study and pursuit of scientific activities by fostering aspirations is valid for both males and females.

Do top performers feel prepared for science-related careers?

Career preparation

In PISA 2006 students were asked a series of questions about how well the school has prepared them for future science-related careers. *The index of school preparation for science-related careers* was derived from students' level of agreement with the following statements: *i)* the subjects available at my school provide students with the basic skills and knowledge for a science-related career; *ii)* the science subjects at my school provide students with the basic skills and knowledge for many different careers; *iii)* the subjects I study provide me with the basic skills and knowledge for a science-related career; and *iv)* my teachers equip me with the basic skills and knowledge I need for a science-related career. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used.



Top performers in science report being significantly better prepared for science-related careers than students in other performance groups, even the strong performers (index values of 0.31 for top performers and 0.10 for strong performers, on average across the OECD countries [Table A3.13a]). It is worth noting that the majority of students in all performance groups reported that their schools are preparing them well for science-related careers. However, the percentages of top performers agreeing with each statement were larger than those for all the other performance groups. On average across the OECD countries, at least 80% of top performers agreed that school has prepared them for science-related careers (Table 3.6). Indeed, at least three-quaters of students in each performance group reported agreement with the statements about their schools in general. There are notable differences, however, between top performers and the lowest performers with regard to statements aimed at the students' individual preparation, as distinct from the school in general: on average across the OECD countries, top performers agreed that the subjects they study (82%) and their teachers (81%) provide them with the basic skills and knowledge for a science-related career (compared to 65% and 67% respectively of low performers).

Table 3.6
Science-related careers: school preparation and student information

Average percentage of students by performance group in OECD countries agreeing or strongly agreeing with each statement:

General value of science	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
The subjects available at my school provide students with the basic skills and knowledge for a science-related career.	78	82	85	88
The science subjects at my school provide students with the basic skills and knowledge for many different careers.	75	79	83	85
The subjects I study provide me with the basic skills and knowledge for a science-related career.	65	69	75	82
My teachers equip me with the basic skills and knowledge I need for a science-related career.	67	71	76	81

Average percentage of students by performance group in OECD countries reporting that they are very well informed or fairly informed about the following:

Student information on science-related careers	Lowest performers %	Moderate performers %	Strong performers %	Top performers %
Where to find information about science-related careers.	49	52	56	59
The steps a student needs to take if they want a science-related career.	50	50	53	58
Science-related careers that are available in the job market.	47	45	50	55
Employers or companies that hire people to work in science-related careers.	43	36	34	34

Information on science-related careers

Top performers in science report that their schools have prepared them well for science-related careers, but how well informed do they report being about possible science-related careers? The *index of student information on science-related careers* was derived from students' beliefs about their level of information about the following topics: *i)* science-related careers that are available in the job market; *ii)* where to find information on science-related careers; *iii)* the steps students need to take if they want a science-related career; and *iv)* employers or companies that hire people to work in science-related careers. A four-point scale with the response categories "very well informed", "fairly informed", "not well informed" and "not informed at all" was used.



Table 3.6 reveals that significant proportions of top performers do not feel well informed about science-related careers. While at least 80% reported that their schools had prepared them well for science-related careers, only between 55 and 59% of top performers on average across the OECD felt informed about where to find information, about the steps they would need to take and about available jobs. Only 34% of top performers reported being informed about employers or companies that hire people to work in science-related careers – a lower percentage than that for lowest performers (43%) on average across the OECD countries (Table 3.6).

In short, top performers perceived themselves to be well prepared by their schools for a science-related career, but less well informed about the careers available. There is not much variation among the performance groups with regard to information on science-related careers (Table A3.14a). It is particularly striking, however, that only 56% of strong performers and 59% of top performers report being informed on where to find information about science-related careers. This is an area where schools can act.

When top performers are relatively unmotivated, what are they like?

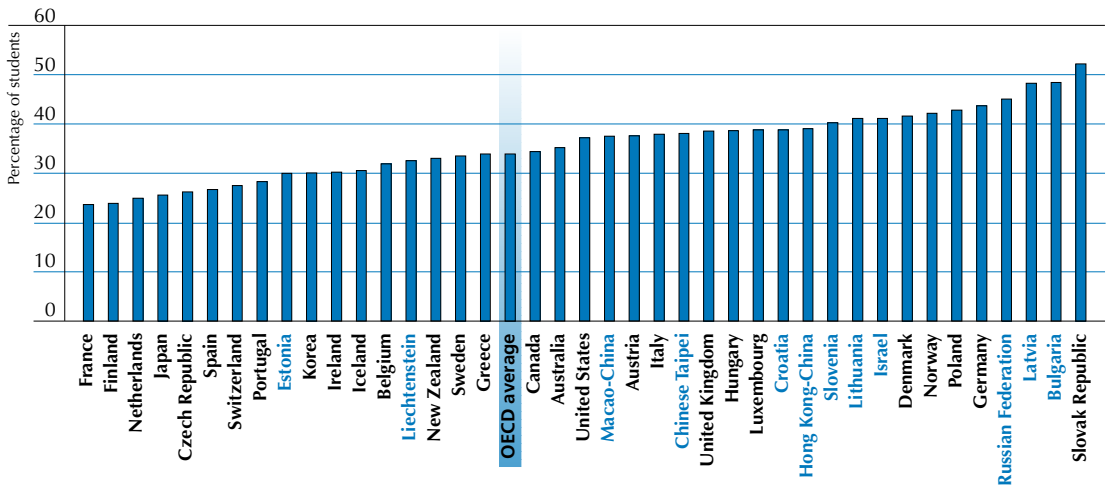
The previous section shows that top performers in science tend to have high aspirations for science study beyond secondary school and for active involvement in scientific careers or projects in future (Table A3.12a). This finding is encouraging as top performers at the age of 15 constitute a potential pool for future scientifically-oriented occupations. But are all top performers in science motivated towards continuing with science? The last section of this chapter studies relatively unmotivated top performers in science than others; including whether the proportion of these students varies across countries; and who they are.

Relatively unmotivated top performers in science are defined as top performers in science who reported motivation levels below the average motivation of science strong performers in the *index of future-oriented science motivation*. From a policy perspective, this comparison between strong and top performers seems relevant as it highlights differences between those who excel and those that are closest to excellence.

Figure 3.7a

Proportion of relatively unmotivated top performers, by country

Percentage of top performers in science who reported motivation levels below the average motivation of science strong performers in the index of future-oriented science motivation

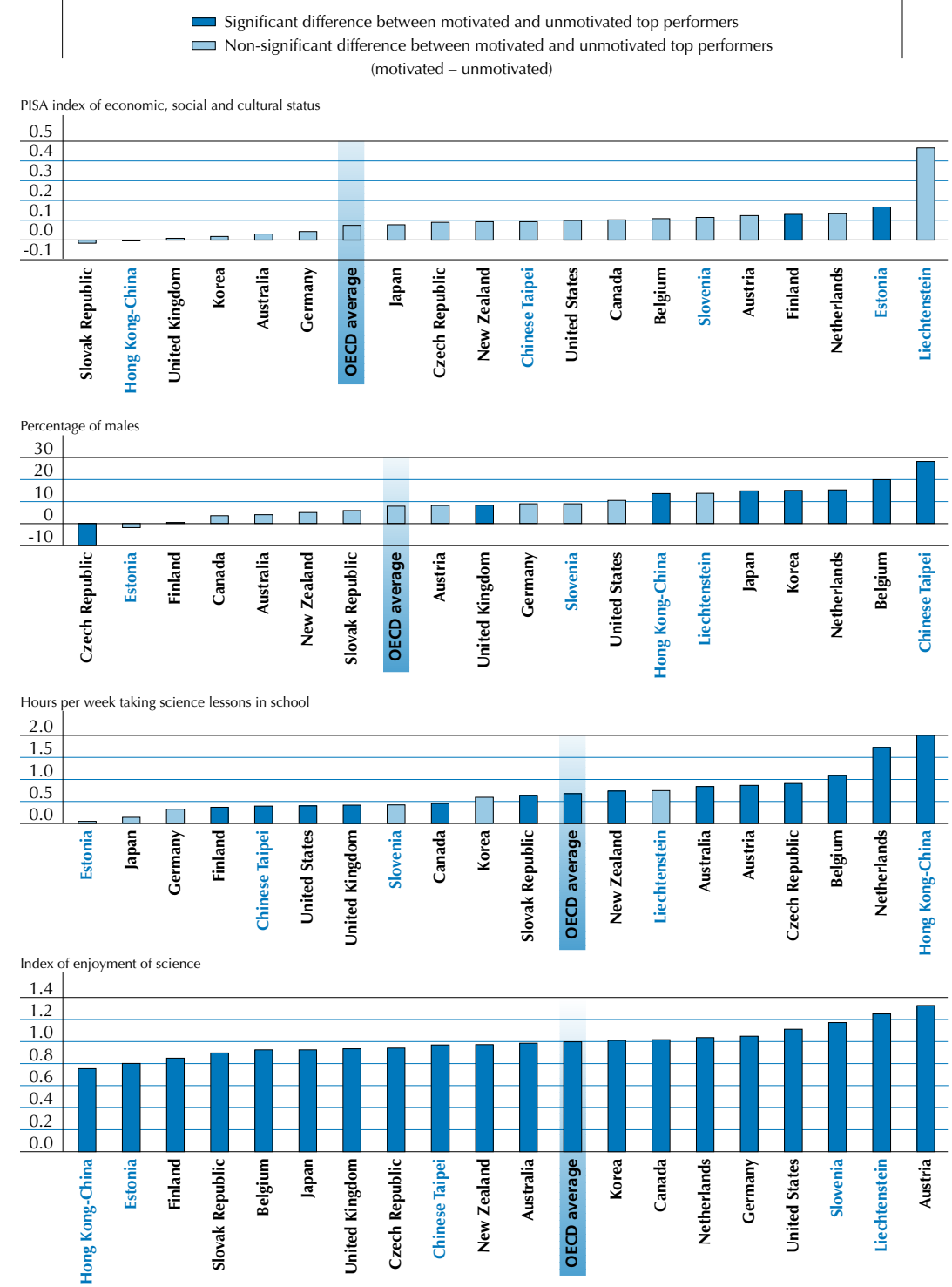


Countries are ranked in ascending order of the percentage of relatively unmotivated top performers.
Source: *OECD PISA 2006 Database,* Table A3.15.

TOP OF THE CLASS – HIGH PERFORMERS IN SCIENCE IN PISA 2006 – ISBN 978-92-64-06068-5 – © OECD 2009



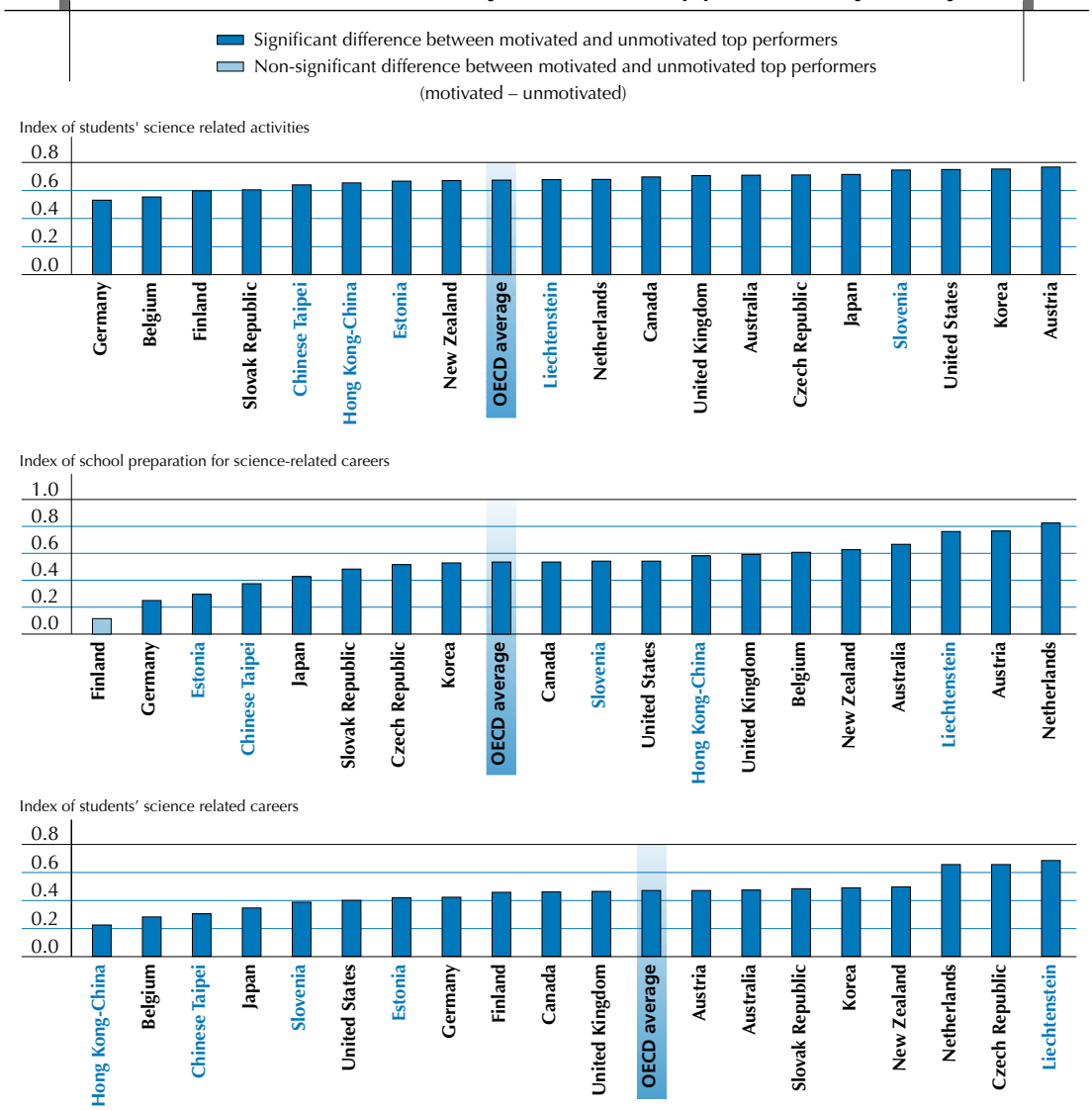
Figure 3.7b [1/2]
Some characteristics of relatively unmotivated top performers, by country



For each chart included in the Figure 3.7b, countries are ranked in ascending order of the characteristic described in the chart.
Source: *OECD PISA 2006 Database,* Table A3.15.



Figure 3.7b [2/2]
Some characteristics of relatively unmotivated top performers, by country



For each chart included in the Figure 3.7b, countries are ranked in ascending order of the characteristic described in the chart.
Source: *OECD PISA 2006 Database,* Table A3.15.

Across OECD countries, 34% of top performers reported lower future-oriented motivation than the average strong performer (Table A3.15). However, this varies significantly across countries. In the Slovak Republic, Latvia and Bulgaria about half of top performers report being less motivated than the average national strong performer. At the other extreme, in France, Finland, and the Netherlands less than a quarter of top performers in science report to have below the average *index of future-oriented science motivation* than science strong performers in the country.



Given the large proportions of relatively unmotivated students among top performers in science in some countries, understanding who these students are and what characterises may result in important insights for educational policy makers. What characterises these less motivated top performers? Do they come from a disadvantaged background? Are male students more or less likely to be relatively unmotivated top performers? Do they experience teaching and learning differently? Do they engage similarly in science-related activities? And do the report having access to the same level of information?

Relatively unmotivated top performers are not necessarily socio-economically disadvantaged compared with the motivated top performers. The average socio-economic background for the less motivated top performers does not differ from the average socio-economic background for the motivated top performers in all 19 countries where sufficient data are available except Austria and Greece.

Gender also plays little or no role in explaining differences in motivation among top performers in science. In 11 countries, no gender difference is observed between the motivated and relatively unmotivated top performers. Females however are more likely than males to be relatively unmotivated top performers in Belgium, the Netherlands, Korea, Japan and the United Kingdom as well as the partner economies Chinese Taipei and Hong Kong-China. Only in the Czech Republic are male top performers more likely than females to be relatively unmotivated.

Greater difference between the motivated and less motivated top performers is observed in students' experience in learning science. The motivated top performers spend longer time in science lessons in school in 13 countries. Motivated top performers spend at least one hour longer in science lessons than the less motivated top performers in the Netherland, Belgium and the partner economy Hong Kong-China. Again, the data do not allow to infer what is cause and effect here, at least one explanation is that motivate top performers spend more time in science because of their motivation.

Even more significant is the difference found in enjoyment of science learning. In all 19 countries where the data are available, motivated top performers in science enjoy learning science more than relatively unmotivated top performers in science: they generally report having fun when they are learning science topics, they like reading about science, they are happy doing science problems, they enjoy acquiring new knowledge in science and they are interested in learning about science. The difference between the motivated and less motivated top performers is at least three-quarters of a standard deviation in the index of enjoyment of science, and the difference is one standard deviation or more in some countries including Austria, the United States, Germany, the Netherlands, Canada, Korea and the partner countries Liechtenstein and Slovenia.

In their daily life, motivated top performers in science tend to engage significantly more than relatively unmotivated top performers in science in science related activities. Motivated top performers engage in the followings activities more frequently than relatively unmotivated top performers in science: Watch TV programmes about science, borrow or buy books on science topics, visit web sites about science topics, listen to radio programmes about advances in science, read science magazines or science articles in newspapers and attend science club. The difference between in the i*ndex of students' science-related activities* between motivated and less motivated top performers ranges from half a standard deviation to three-quarters of a standard deviation.

In terms of the information provided by their schools, motivated top performance in science report more often than relatively unmotivated ones receiving enough information, basic skills and knowledge for a future career in science. The differences in the *index of student information on science-related careers* among motivated and relatively unmotivated top performers range from around a quarter of a standard



deviation in Belgium and partner economy Hong Kong-China, to two thirds or more of a standard deviation in the Netherlands and in partner countries Lichtenstein and the Czech Republic.

All in all, differences in motivation among top performers in science appear to be driven by student experiences with teaching and learning, their engagement in science activities, and the information they receive about future science related careers. Coupled with the limited role of socio-economic background and gender in explaining these differences, these findings provide educational policy makers food-for-thought in the design of policies to promote motivation among all students and in particular among top performers in science.

IMPLICATIONS FOR EDUCATIONAL POLICY AND PRACTICE

The main finding of this chapter is that top performing students are dedicated and engaged learners. They tend to devote more time to studying than other students, above all at school. When not at school, they engage in science related activities relatively often. Last but not least, they regard learning science as a potential career investment.

In terms of their experiences, attitudes, motivations and aspirations, top performers in science are dedicated and engaged learners who aspire to a career in science. Top performers in science also tend to spend more time in regular science lessons at school and more frequently engage in science related activities. They are confident learners interested in a broad range of science topics, they enjoy learning science even when the content is challenging and they believe they are good at science. They think that learning science will prove useful for them in their further studies and professional activities and more often aspire to a career in science, whether this is a cause or consequence of their performance and engagement with science. However, top performers often do not feel well informed about potential career opportunities in science, which is an area school policy and practice can act upon. The link between attitudes and motivations is strengthened by evidence suggesting that motivation among top performers is unrelated to socio-economic factors but rather a reflection of their enjoyment and active engagement in science learning inside and outside school.

At the same time, in a number of countries there are significant proportions of top performers who show comparatively low levels of interest in science. While these education systems have succeeded in conveying scientific knowledge and competencies to students, they have been less successful in engaging them in science-related issues and fostering their career aspirations in science. These countries may thus not fully realise the potential of these students. Fostering interest and motivation in science, factors that this report shows to be highly related to engagement with science, thus seems an important policy goal in its own right. Efforts to this end may relate to improved instructional techniques and a more engaging learning environment at school but they can also extend to students' lives outside school, such as through establishing and making available more and better content on the Internet or in video games that applies scientific principles; establishing contests on the Internet with prizes for students who achieve particular levels of performance or stages of accomplishment; more and better television programming using children's cartoons to enlist interests in science and scientific curiosity for younger children; or science fiction novels and series of books on adventures or mysteries based upon scientific and technical knowledge, ingenuity and solutions with characters.

In sum, educational excellence goes hand in hand with promoting student engagement in and enjoyment of science learning both inside and outside the school. The payoff is quite significant: a large and diverse talent pool ready to take up the challenge of a career in science. In today's global economy, it is the opportunity to compete on innovation and technology.



Notes

1. These countries were Denmark, Germany, Iceland, Italy, Korea, Luxembourg, New Zealand, Poland, Portugal and Turkey, and the partner countries and economies Bulgaria, Colombia, Croatia, Hong Kong-China, Macao-China and Qatar. In examining the results from the PISA parent questionnaire, it should be noted that in some countries non-response was considerable. Countries with considerable missing data in the parent questionnaire area listed in the following together with the proportion of missing data in brackets: Portugal (11%), Italy (14%), Germany (20%), Luxembourg (24%), New Zealand (32%), Iceland (36%) and Qatar (40%).

2. Note however that for both Portugal and Greece we are talking about a small proportion of all students as only 3% of all students are top performers. The evidence in this case for these two countries should be interpreted with caution.



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Appendix A

DATA TABLES

TOP OF THE CLASS – HIGH PERFORMERS IN SCIENCE IN PISA 2006 – ISBN 978-92-64-06068-5 – © OECD 2009



[Part 1/1]

Table A1.1 Mean score and percentage of top performers in science, reading and mathematics

		Science						Reading				Mathematics					
		Mean score		Top performers: Level 5 (from 633.33 to 707.93 score points)		Top performers: Level 6 (above 707.93 score points)		Mean score		Top performers: Level 5 (above 625.61 score points)		Mean score		Top performers: Level 5 (from 606.99 to 669.30 score points)		Top performers: Level 6 (above 669.30 score points)	
		Mean	S.E.	%	S.E.	%	S.E.	Mean	S.E.	%	S.E.	Mean	S.E.	%	S.E.	%	S.E.
OECD	Australia	527	(2.3)	11.8	(0.5)	2.8	(0.3)	513	(2.1)	10.6	(0.6)	520	(2.2)	12.1	(0.5)	4.3	(0.5)
	Austria	511	(3.9)	8.8	(0.7)	1.2	(0.2)	490	(4.1)	9.0	(0.7)	505	(3.7)	12.3	(0.8)	3.5	(0.5)
	Belgium	510	(2.5)	9.1	(0.5)	1.0	(0.2)	501	(3.0)	11.3	(0.6)	520	(3.0)	16.0	(0.7)	6.4	(0.4)
	Canada	534	(2.0)	12.0	(0.5)	2.4	(0.2)	527	(2.4)	14.5	(0.7)	527	(2.0)	13.6	(0.6)	4.4	(0.4)
	Czech Republic	513	(3.5)	9.8	(0.9)	1.8	(0.3)	483	(4.2)	9.2	(0.8)	510	(3.6)	12.3	(0.8)	6.0	(0.7)
	Denmark	496	(3.1)	6.1	(0.7)	0.7	(0.2)	494	(3.2)	5.9	(0.6)	513	(2.6)	10.9	(0.6)	2.8	(0.4)
	Finland	563	(2.0)	17.0	(0.7)	3.9	(0.3)	547	(2.1)	16.7	(0.8)	548	(2.3)	18.1	(0.8)	6.3	(0.5)
	France	495	(3.4)	7.2	(0.6)	0.8	(0.2)	488	(4.1)	7.3	(0.7)	496	(3.2)	9.9	(0.7)	2.6	(0.5)
	Germany	516	(3.8)	10.0	(0.6)	1.8	(0.2)	495	(4.4)	9.9	(0.7)	504	(3.9)	11.0	(0.8)	4.5	(0.5)
	Greece	473	(3.2)	3.2	(0.3)	0.2	(0.1)	460	(4.0)	3.5	(0.4)	459	(3.0)	4.2	(0.5)	0.9	(0.2)
	Hungary	504	(2.7)	6.2	(0.6)	0.6	(0.2)	482	(3.3)	4.7	(0.6)	491	(2.9)	7.7	(0.7)	2.6	(0.5)
	Iceland	491	(1.6)	5.6	(0.5)	0.7	(0.2)	484	(1.9)	6.0	(0.5)	506	(1.8)	10.1	(0.7)	2.5	(0.3)
	Ireland	508	(3.2)	8.3	(0.6)	1.1	(0.2)	517	(3.5)	11.7	(0.8)	501	(2.8)	8.6	(0.7)	1.6	(0.2)
	Italy	475	(2.0)	4.2	(0.3)	0.4	(0.1)	469	(2.4)	5.2	(0.4)	462	(2.3)	5.0	(0.4)	1.3	(0.3)
	Japan	531	(3.4)	12.4	(0.6)	2.6	(0.3)	498	(3.6)	9.4	(0.7)	523	(3.3)	13.5	(0.8)	4.8	(0.5)
	Korea	522	(3.4)	9.2	(0.8)	1.1	(0.3)	556	(3.8)	21.7	(1.4)	547	(3.8)	18.0	(0.8)	9.1	(1.3)
	Luxembourg	486	(1.1)	5.4	(0.3)	0.5	(0.1)	479	(1.3)	5.6	(0.4)	490	(1.1)	8.2	(0.5)	2.3	(0.3)
	Mexico	410	(2.7)	0.3	(0.1)	0.0	a	410	(3.1)	0.6	(0.1)	406	(2.9)	0.8	(0.2)	0.1	(0.0)
	Netherlands	525	(2.7)	11.5	(0.8)	1.7	(0.2)	507	(2.9)	9.1	(0.6)	531	(2.6)	15.8	(0.8)	5.4	(0.6)
	New Zealand	530	(2.7)	13.6	(0.7)	4.0	(0.4)	521	(3.0)	15.9	(0.8)	522	(2.4)	13.2	(0.7)	5.7	(0.5)
	Norway	487	(3.1)	5.5	(0.4)	0.6	(0.1)	484	(3.2)	7.7	(0.6)	490	(2.6)	8.3	(0.7)	2.1	(0.3)
	Poland	498	(2.3)	6.1	(0.4)	0.7	(0.1)	508	(2.8)	11.6	(0.8)	495	(2.4)	8.6	(0.7)	2.0	(0.3)
	Portugal	474	(3.0)	3.0	(0.4)	0.1	(0.1)	472	(3.6)	4.6	(0.5)	466	(3.1)	4.9	(0.4)	0.8	(0.2)
	Slovak Republic	488	(2.6)	5.2	(0.5)	0.6	(0.1)	466	(3.1)	5.4	(0.5)	492	(2.8)	8.6	(0.7)	2.4	(0.4)
	Spain	488	(2.6)	4.5	(0.4)	0.3	(0.1)	461	(2.2)	1.8	(0.2)	480	(2.3)	6.1	(0.4)	1.2	(0.2)
	Sweden	503	(2.4)	6.8	(0.5)	1.1	(0.2)	507	(3.4)	10.6	(0.8)	502	(2.4)	9.7	(0.6)	2.9	(0.4)
	Switzerland	512	(3.2)	9.1	(0.8)	1.4	(0.3)	499	(3.1)	7.7	(0.7)	530	(3.2)	15.9	(0.7)	6.8	(0.6)
	Turkey	424	(3.8)	0.9	(0.3)	0.0	a	447	(4.2)	2.1	(0.6)	424	(4.9)	3.0	(0.8)	1.2	(0.5)
	United Kingdom	515	(2.3)	10.9	(0.5)	2.9	(0.3)	495	(2.3)	9.0	(0.6)	495	(2.1)	8.7	(0.5)	2.5	(0.3)
	United States	489	(4.2)	7.5	(0.6)	1.5	(0.2)	m	m	m	m	474	(4.0)	6.4	(0.7)	1.3	(0.2)
	OECD total	491	(1.2)	7.4	(0.2)	1.4	(0.1)	484	(1.0)	8.1	(0.2)	484	(1.2)	8.3	(0.2)	2.6	(0.1)
	OECD average	500	(0.5)	7.7	(0.1)	1.3	(0.0)	492	(0.6)	8.6	(0.1)	498	(0.5)	10.0	(0.1)	3.3	(0.1)
Partners	Argentina	391	(6.1)	0.4	(0.1)	0.0	a	374	(7.2)	0.9	(0.2)	381	(6.2)	0.9	(0.3)	0.1	(0.1)
	Azerbaijan	382	(2.8)	0.0	a	a	a	353	(3.1)	0.1	(0.1)	476	(2.3)	0.6	(0.3)	0.2	(0.1)
	Brazil	390	(2.8)	0.5	(0.2)	0.0	(0.0)	393	(3.7)	1.1	(0.3)	370	(2.9)	0.8	(0.3)	0.2	(0.1)
	Bulgaria	434	(6.1)	2.6	(0.5)	0.4	(0.2)	402	(6.9)	2.1	(0.5)	413	(6.1)	2.5	(0.6)	0.6	(0.3)
	Chile	438	(4.3)	1.8	(0.3)	0.1	(0.1)	442	(5.0)	3.5	(0.6)	411	(4.6)	1.3	(0.3)	0.1	(0.1)
	Colombia	388	(3.4)	0.2	(0.1)	0.0	a	385	(5.1)	0.6	(0.2)	370	(3.8)	0.4	(0.2)	0.0	(0.0)
	Croatia	493	(2.4)	4.6	(0.4)	0.5	(0.1)	477	(2.8)	3.7	(0.4)	467	(2.4)	4.0	(0.5)	0.8	(0.2)
	Estonia	531	(2.5)	10.1	(0.7)	1.4	(0.3)	501	(2.9)	6.0	(0.6)	515	(2.7)	10.0	(0.6)	2.6	(0.4)
	Hong Kong-China	542	(2.5)	13.9	(0.8)	2.1	(0.3)	536	(2.4)	12.8	(0.8)	547	(2.7)	18.7	(0.8)	9.0	(0.8)
	Indonesia	393	(5.7)	0.0	a	a	a	393	(5.9)	0.1	(0.0)	391	(5.6)	0.4	(0.2)	0.0	a
	Israel	454	(3.7)	4.4	(0.5)	0.8	(0.2)	439	(4.6)	5.0	(0.5)	442	(4.3)	4.8	(0.5)	1.3	(0.2)
	Jordan	422	(2.8)	0.6	(0.2)	0.0	a	401	(3.3)	0.2	(0.1)	384	(3.3)	0.2	(0.1)	0.0	a
	Kyrgyzstan	322	(2.9)	0.0	a	a	a	285	(3.5)	0.1	(0.1)	311	(3.4)	0.0	(0.1)	0.0	a
	Latvia	490	(3.0)	3.8	(0.4)	0.3	(0.1)	479	(3.7)	4.5	(0.5)	486	(3.0)	5.5	(0.5)	1.1	(0.3)
	Liechtenstein	522	(4.1)	10.0	(1.8)	2.2	(0.8)	510	(3.9)	9.8	(1.8)	525	(4.2)	12.6	(2.1)	5.8	(1.2)
	Lithuania	488	(2.8)	4.5	(0.6)	0.4	(0.2)	470	(3.0)	4.4	(0.5)	486	(2.9)	7.3	(0.8)	1.8	(0.4)
	Macao-China	511	(1.1)	5.0	(0.3)	0.3	(0.1)	492	(1.1)	3.0	(0.3)	525	(1.3)	13.6	(0.6)	3.8	(0.4)
	Montenegro	412	(1.1)	0.3	(0.1)	0.0	a	392	(1.2)	0.4	(0.2)	399	(1.4)	0.8	(0.2)	0.1	(0.1)
	Qatar	349	(0.9)	0.3	(0.1)	0.0	(0.0)	312	(1.2)	0.6	(0.1)	318	(1.0)	0.5	(0.1)	0.1	(0.0)
	Romania	418	(4.2)	0.5	(0.1)	0.0	a	396	(4.7)	0.3	(0.1)	415	(4.2)	1.1	(0.3)	0.1	(0.1)
	Russian Federation	479	(3.7)	3.7	(0.5)	0.5	(0.1)	440	(4.3)	1.7	(0.3)	476	(3.9)	5.7	(0.6)	1.7	(0.3)
	Serbia	436	(3.0)	0.8	(0.2)	0.0	a	401	(3.5)	0.3	(0.1)	435	(3.5)	2.4	(0.4)	0.4	(0.1)
	Slovenia	519	(1.1)	10.7	(0.6)	2.2	(0.3)	494	(1.0)	5.3	(0.5)	504	(1.0)	10.3	(0.8)	3.4	(0.4)
	Chinese Taipei	532	(3.6)	12.9	(0.8)	1.7	(0.2)	496	(3.4)	4.7	(0.6)	549	(4.1)	20.1	(0.9)	11.8	(0.8)
	Thailand	421	(2.1)	0.4	(0.1)	0.0	a	417	(2.6)	0.3	(0.1)	417	(2.3)	1.1	(0.2)	0.2	(0.1)
	Tunisia	386	(3.0)	0.1	(0.1)	0.0	a	380	(4.0)	0.2	(0.1)	365	(4.0)	0.5	(0.2)	0.0	a
	Uruguay	428	(2.7)	1.3	(0.2)	0.1	(0.1)	413	(3.4)	3.1	(0.4)	427	(2.6)	2.6	(0.4)	0.6	(0.2)

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[Part 1/1]

Table A2.1a Overlapping of top performers in science, reading and mathematics

		15-year-old students who are:																Percentage of top performers in science, who are top performers in reading and mathematics as well	
		not top performers in any of the three domains		top performers only in science		top performers only in reading		top performers only in mathematics		top performers in science and reading but not in mathematics		top performers in science and mathematics but not in reading		top performers in reading and mathematics but not in science		top performers in all three domains			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	78.0	(0.8)	2.8	(0.2)	1.6	(0.2)	4.5	(0.4)	1.2	(0.2)	4.0	(0.3)	1.2	(0.1)	6.6	(0.4)	45.4	(1.8)
	Austria	79.7	(1.2)	1.1	(0.3)	2.3	(0.3)	6.7	(0.6)	1.1	(0.3)	3.4	(0.4)	1.2	(0.3)	4.4	(0.4)	44.1	(3.2)
	Belgium	74.4	(0.8)	0.6	(0.2)	2.2	(0.2)	10.6	(0.6)	0.5	(0.1)	3.2	(0.3)	2.8	(0.3)	5.8	(0.4)	57.5	(2.4)
	Canada	74.3	(0.8)	2.5	(0.3)	3.6	(0.4)	5.6	(0.4)	1.7	(0.2)	3.2	(0.3)	2.1	(0.3)	7.0	(0.4)	48.8	(2.1)
	Czech Republic	78.2	(1.2)	1.2	(0.2)	1.6	(0.2)	7.1	(0.6)	0.6	(0.2)	4.2	(0.5)	1.4	(0.3)	5.5	(0.6)	47.4	(3.2)
	Denmark	84.0	(0.8)	0.6	(0.2)	1.2	(0.3)	6.7	(0.5)	0.4	(0.1)	2.8	(0.5)	1.3	(0.3)	3.0	(0.5)	43.7	(5.2)
	Finland	67.2	(1.0)	2.9	(0.3)	3.3	(0.4)	6.9	(0.6)	2.1	(0.3)	6.3	(0.5)	1.7	(0.3)	9.5	(0.5)	45.6	(2.0)
	France	82.7	(1.0)	1.3	(0.2)	2.7	(0.5)	5.6	(0.5)	0.8	(0.2)	3.1	(0.4)	0.9	(0.2)	2.8	(0.4)	35.3	(3.8)
	Germany	79.6	(1.1)	1.8	(0.2)	2.3	(0.4)	4.9	(0.6)	0.9	(0.2)	3.9	(0.4)	1.4	(0.3)	5.2	(0.5)	44.2	(3.1)
	Greece	91.8	(0.6)	1.0	(0.2)	1.6	(0.3)	2.8	(0.3)	0.5	(0.2)	1.0	(0.2)	0.4	(0.1)	0.9	(0.2)	25.9	(5.2)
	Hungary	86.9	(1.0)	1.1	(0.2)	1.1	(0.3)	4.3	(0.5)	0.4	(0.2)	2.9	(0.4)	0.7	(0.2)	2.4	(0.4)	35.2	(3.8)
	Iceland	84.6	(0.7)	0.9	(0.2)	1.5	(0.3)	6.3	(0.4)	0.4	(0.2)	2.3	(0.4)	1.3	(0.3)	2.8	(0.3)	44.4	(4.9)
	Ireland	82.7	(0.9)	1.5	(0.3)	3.9	(0.5)	2.7	(0.4)	1.7	(0.3)	1.5	(0.3)	1.3	(0.2)	4.8	(0.5)	50.5	(3.8)
	Italy	89.3	(0.6)	1.2	(0.1)	2.7	(0.3)	2.8	(0.3)	0.6	(0.1)	1.5	(0.2)	0.6	(0.1)	1.3	(0.2)	27.4	(2.7)
	Japan	76.0	(1.1)	3.0	(0.3)	1.5	(0.3)	6.3	(0.6)	1.2	(0.2)	5.3	(0.5)	1.1	(0.2)	5.5	(0.5)	36.8	(2.2)
	Korea	66.4	(1.5)	0.2	(0.1)	5.7	(0.6)	10.0	(0.8)	0.6	(0.2)	1.7	(0.4)	7.6	(0.7)	7.8	(0.8)	75.8	(3.2)
	Luxembourg	86.6	(0.6)	0.7	(0.1)	1.5	(0.2)	5.0	(0.4)	0.6	(0.1)	2.1	(0.3)	1.0	(0.2)	2.5	(0.3)	42.4	(4.0)
	Mexico	98.6	(0.2)	0.1	(0.1)	0.4	(0.1)	0.6	(0.2)	0.0	(0.0)	0.1	(0.0)	0.1	(0.0)	0.0	(0.0)	c	c
	Netherlands	75.8	(1.0)	1.3	(0.3)	1.2	(0.3)	8.3	(0.8)	0.5	(0.2)	5.5	(0.5)	1.6	(0.3)	5.8	(0.5)	44.0	(3.1)
	New Zealand	73.2	(1.0)	2.2	(0.3)	3.5	(0.4)	4.5	(0.4)	2.2	(0.3)	4.2	(0.5)	1.2	(0.3)	8.9	(0.6)	50.8	(2.7)
	Norway	85.1	(0.9)	0.8	(0.2)	2.9	(0.5)	4.5	(0.5)	0.7	(0.2)	1.8	(0.3)	1.3	(0.3)	2.7	(0.3)	45.1	(3.6)
	Poland	82.6	(0.9)	0.8	(0.2)	5.1	(0.4)	3.6	(0.4)	0.9	(0.2)	1.4	(0.3)	1.9	(0.3)	3.7	(0.4)	54.1	(4.3)
	Portugal	91.5	(0.6)	0.4	(0.1)	2.1	(0.3)	2.6	(0.3)	0.4	(0.1)	0.9	(0.2)	0.8	(0.2)	1.5	(0.2)	46.4	(4.8)
	Slovak Republic	86.2	(0.9)	0.8	(0.2)	1.6	(0.3)	5.4	(0.7)	0.5	(0.1)	2.2	(0.3)	1.0	(0.2)	2.3	(0.3)	40.6	(3.5)
	Spain	90.5	(0.6)	1.5	(0.2)	0.6	(0.1)	3.8	(0.3)	0.2	(0.1)	2.4	(0.3)	0.3	(0.1)	0.8	(0.2)	15.6	(2.8)
	Sweden	81.9	(1.0)	0.9	(0.3)	3.8	(0.5)	4.5	(0.6)	0.8	(0.2)	2.1	(0.4)	1.9	(0.4)	4.1	(0.3)	51.8	(3.4)
	Switzerland	75.5	(1.2)	0.7	(0.1)	0.9	(0.2)	11.7	(0.6)	0.3	(0.1)	4.4	(0.4)	1.5	(0.2)	5.0	(0.5)	48.0	(2.8)
	Turkey	94.6	(1.3)	0.1	(0.1)	1.1	(0.3)	2.8	(0.8)	0.1	(0.0)	0.4	(0.2)	0.6	(0.3)	0.4	(0.2)	c	c
	United Kingdom	81.8	(0.7)	3.5	(0.3)	1.7	(0.2)	2.2	(0.3)	1.9	(0.3)	3.4	(0.4)	0.5	(0.1)	4.9	(0.3)	35.9	(1.9)
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average	82.1	(0.2)	1.3	(0.0)	2.3	(0.1)	5.3	(0.1)	0.8	(0.0)	2.8	(0.1)	1.4	(0.1)	4.1	(0.1)	44.1	(0.7)
Partners	Argentina	98.1	(0.4)	0.2	(0.1)	0.7	(0.2)	0.7	(0.3)	0.1	(0.0)	0.2	(0.1)	0.1	(0.1)	0.1	(0.1)	c	c
	Azerbaijan	99.0	(0.3)	a	a	0.1	(0.1)	0.9	(0.3)	a	a	0.0	(0.0)	0.0	(0.0)	a	a	c	c
	Brazil	98.1	(0.4)	0.1	(0.1)	0.7	(0.2)	0.4	(0.1)	0.1	(0.0)	0.2	(0.1)	0.2	(0.1)	0.2	(0.1)	c	c
	Bulgaria	94.4	(1.0)	1.1	(0.3)	0.9	(0.3)	1.4	(0.4)	0.4	(0.2)	1.0	(0.3)	0.2	(0.1)	0.6	(0.2)	18.3	(5.7)
	Chile	94.9	(0.8)	0.8	(0.2)	2.4	(0.5)	0.5	(0.2)	0.4	(0.2)	0.3	(0.1)	0.3	(0.1)	0.4	(0.1)	c	c
	Colombia	99.0	(0.4)	0.1	(0.0)	0.5	(0.2)	0.3	(0.2)	0.0	(0.0)	0.1	(0.0)	0.0	(0.0)	0.0	(0.0)	c	c
	Croatia	91.7	(0.7)	1.4	(0.2)	1.4	(0.3)	1.6	(0.3)	0.8	(0.2)	1.6	(0.2)	0.2	(0.1)	1.3	(0.2)	26.4	(3.8)
	Estonia	83.3	(1.0)	2.5	(0.4)	1.0	(0.3)	3.8	(0.4)	0.7	(0.2)	4.4	(0.4)	0.4	(0.2)	3.9	(0.5)	34.0	(3.2)
	Hong Kong-China	68.5	(1.1)	1.1	(0.3)	2.2	(0.3)	10.9	(0.6)	0.5	(0.1)	6.6	(0.5)	2.5	(0.4)	7.7	(0.6)	48.3	(2.3)
	Indonesia	99.6	(0.2)	a	a	0.0	(0.0)	0.4	(0.2)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	a	a	c	(0.0)
	Israel	89.6	(0.9)	1.6	(0.4)	1.8	(0.3)	2.7	(0.4)	0.9	(0.2)	1.1	(0.2)	0.6	(0.3)	1.7	(0.2)	31.7	(3.9)
	Jordan	99.1	(0.2)	0.5	(0.2)	0.2	(0.1)	0.1	(0.1)	0.1	(0.0)	0.1	(0.1)	0.0	(0.0)	0.0	(0.0)	c	c
	Kyrgyzstan	99.9	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	a	a	0.0	(0.0)	0.0	(0.0)	a	a	c	c
	Latvia	90.3	(0.8)	0.8	(0.2)	1.9	(0.3)	3.0	(0.3)	0.4	(0.2)	1.4	(0.3)	0.8	(0.2)	1.5	(0.2)	35.8	(5.6)
	Liechtenstein	79.2	(2.1)	1.0	(0.6)	1.1	(0.8)	6.5	(1.6)	0.5	(0.5)	3.7	(1.3)	1.1	(0.7)	7.2	(1.4)	59.4	(11.2)
	Lithuania	88.5	(0.9)	0.7	(0.2)	1.4	(0.3)	4.5	(0.5)	0.3	(0.1)	2.0	(0.4)	0.6	(0.2)	2.0	(0.3)	40.8	(4.9)
	Macao-China	81.2	(0.7)	0.5	(0.2)	0.8	(0.2)	11.9	(0.8)	0.1	(0.0)	3.4	(0.4)	0.8	(0.2)	1.3	(0.2)	24.2	(3.6)
	Montenegro	98.8	(0.2)	0.0	(0.0)	0.2	(0.1)	0.6	(0.2)	0.1	(0.1)	0.1	(0.0)	0.1	(0.1)	0.1	(0.1)	c	c
	Qatar	99.0	(0.1)	0.1	(0.0)	0.3	(0.1)	0.3	(0.1)	0.1	(0.1)	0.1	(0.0)	0.1	(0.1)	0.1	(0.1)	c	c
	Romania	98.3	(0.4)	0.1	(0.1)	0.2	(0.1)	0.9	(0.2)	0.0	(0.0)	0.3	(0.1)	0.0	(0.0)	0.0	(0.0)	c	c
	Russian Federation	90.6	(0.9)	1.2	(0.3)	0.6	(0.1)	4.4	(0.6)	0.2	(0.1)	2.2	(0.3)	0.3	(0.1)	0.6	(0.1)	15.3	(3.4)
	Serbia	96.8	(0.4)	0.2	(0.1)	0.1	(0.1)	2.2	(0.4)	0.0	(0.0)	0.5	(0.2)	0.1	(0.0)	0.1	(0.0)	c	c
	Slovenia	81.9	(0.6)	2.8	(0.3)	0.6	(0.2)	4.3	(0.5)	1.0	(0.2)	5.8	(0.5)	0.3	(0.1)	3.3	(0.4)	25.7	(2.8)
	Chinese Taipei	67.0	(1.4)	0.8	(0.2)	0.2	(0.1)	17.7	(0.9)	0.1	(0.1)	9.8	(0.6)	0.5	(0.1)	3.9	(0.5)	26.9	(2.4)
	Thailand	98.4	(0.3)	0.1	(0.1)	0.2	(0.1)	1.0	(0.2)	0.0	(0.0)	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	c	c
	Tunisia	99.3	(0.3)	0.1	(0.0)	0.1	(0.1)	0.4	(0.2)	0.0	(0.0)	0.1	(0.0)	0.0	(0.0)	0.0	(0.0)	c	c
	Uruguay	94.2	(0.5)	0.4	(0.1)	2.0	(0.4)	2.0	(0.3)	0.3	(0.1)	0.4	(0.1)	0.4	(0.1)	0.4	(0.1)	c	c



[Part 1/2]

Table A2.1b Overlapping of top performers in science, reading and mathematics, by gender

		Females																	
		Females who are:																Percentage of female top performers in science, who are top performers in reading and mathematics as well	
		not top performers in any of the three domains		top performers only in science		top performers only in reading		top performers only in mathematics		top performers in science and reading but not in mathematics		top performers in science and mathematics but not in reading		top performers in reading and mathematics but not in science		top performers in all three domains			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	79.1	(0.9)	2.7	(0.4)	3.0	(0.4)	2.7	(0.4)	2.0	(0.3)	2.0	(0.3)	1.6	(0.2)	6.9	(0.5)	50.8	(2.9)
	Austria	81.0	(1.4)	0.9	(0.4)	4.3	(0.7)	4.2	(0.6)	1.7	(0.4)	1.4	(0.3)	1.8	(0.4)	4.6	(0.4)	53.6	(4.8)
	Belgium	75.6	(1.2)	0.5	(0.2)	3.7	(0.5)	8.1	(0.7)	0.7	(0.2)	1.7	(0.3)	3.7	(0.4)	6.0	(0.6)	67.4	(3.5)
	Canada	74.9	(1.0)	2.0	(0.4)	5.8	(0.8)	3.6	(0.4)	2.5	(0.4)	1.7	(0.2)	2.6	(0.3)	6.9	(0.5)	52.7	(2.9)
	Czech Republic	77.6	(1.8)	1.1	(0.3)	3.1	(0.5)	5.9	(0.9)	1.0	(0.3)	2.5	(0.5)	2.2	(0.5)	6.5	(0.9)	58.3	(3.7)
	Denmark	84.8	(1.0)	0.4	(0.2)	2.0	(0.4)	5.5	(0.8)	0.5	(0.2)	1.6	(0.4)	1.8	(0.5)	3.3	(0.5)	57.3	(6.2)
	Finland	66.7	(1.3)	2.5	(0.4)	6.1	(0.8)	4.4	(0.7)	3.6	(0.5)	2.8	(0.4)	2.6	(0.4)	11.4	(0.8)	56.2	(2.8)
	France	83.4	(1.2)	0.9	(0.2)	4.2	(0.8)	4.7	(0.6)	0.8	(0.4)	2.1	(0.4)	1.1	(0.3)	2.7	(0.6)	42.2	(6.5)
	Germany	81.2	(1.1)	1.3	(0.4)	4.2	(0.6)	2.8	(0.5)	1.3	(0.3)	1.7	(0.3)	1.9	(0.6)	5.5	(0.6)	55.8	(4.6)
	Greece	92.2	(0.8)	0.8	(0.3)	2.6	(0.4)	1.8	(0.4)	0.7	(0.3)	0.5	(0.2)	0.5	(0.2)	0.8	(0.2)	28.8	(7.8)
	Hungary	88.6	(1.2)	0.7	(0.3)	2.1	(0.4)	2.9	(0.4)	0.7	(0.3)	1.2	(0.4)	1.1	(0.3)	2.6	(0.5)	50.4	(7.1)
	Iceland	84.2	(1.1)	1.2	(0.4)	2.5	(0.5)	5.3	(0.6)	0.6	(0.3)	1.4	(0.5)	2.0	(0.6)	1.2	(0.3)	53.4	(9.0)
	Ireland	82.2	(1.2)	0.8	(0.4)	6.2	(0.8)	1.4	(0.5)	2.3	(0.5)	0.7	(0.3)	1.7	(0.4)	3.2	(0.5)	52.5	(6.2)
	Italy	90.0	(0.7)	0.5	(0.2)	4.0	(0.4)	1.6	(0.3)	0.9	(0.2)	0.7	(0.2)	0.6	(0.1)	0.1	(0.1)	30.0	(4.8)
	Japan	79.0	(1.6)	2.9	(0.4)	2.5	(0.5)	4.2	(0.7)	1.8	(0.3)	3.2	(0.5)	1.2	(0.3)	5.3	(0.7)	40.0	(3.4)
	Korea	65.8	(2.1)	0.1	(0.1)	9.1	(1.1)	6.2	(0.8)	0.8	(0.3)	0.5	(0.2)	9.4	(1.1)	8.1	(1.1)	84.7	(4.4)
	Luxembourg	88.1	(0.7)	0.6	(0.2)	2.7	(0.4)	3.4	(0.6)	0.7	(0.2)	0.8	(0.2)	1.4	(0.3)	2.3	(0.4)	52.2	(5.9)
	Mexico	98.7	(0.3)	0.1	(0.1)	0.6	(0.1)	0.4	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.0)	0.0	(0.0)	17.3	(16.2)
	Netherlands	77.3	(1.1)	1.2	(0.4)	2.2	(0.5)	7.1	(0.9)	0.7	(0.2)	3.3	(0.6)	2.2	(0.4)	6.0	(0.6)	53.1	(4.2)
	New Zealand	72.9	(1.5)	2.2	(0.5)	5.5	(0.6)	3.2	(0.6)	3.3	(0.5)	2.6	(0.6)	1.6	(0.4)	8.8	(0.7)	52.0	(3.2)
	Norway	84.9	(1.0)	0.6	(0.2)	4.8	(0.9)	3.0	(0.6)	1.0	(0.3)	1.1	(0.4)	1.8	(0.6)	2.8	(0.6)	50.6	(6.8)
	Poland	82.1	(1.2)	0.4	(0.2)	7.7	(0.7)	2.4	(0.4)	1.2	(0.4)	0.6	(0.2)	2.3	(0.4)	3.3	(0.4)	60.1	(5.5)
	Portugal	92.3	(0.8)	0.3	(0.1)	3.2	(0.5)	1.4	(0.4)	0.5	(0.2)	0.3	(0.2)	0.8	(0.3)	1.2	(0.2)	51.8	(8.4)
	Slovak Republic	87.3	(1.1)	0.5	(0.2)	2.7	(0.6)	3.9	(0.8)	0.7	(0.2)	1.1	(0.2)	1.4	(0.4)	2.5	(0.4)	52.8	(5.6)
	Spain	92.0	(0.7)	1.4	(0.3)	0.9	(0.2)	2.6	(0.3)	0.3	(0.1)	1.6	(0.3)	0.3	(0.1)	0.8	(0.2)	20.5	(4.8)
	Sweden	80.6	(1.3)	0.6	(0.3)	6.1	(0.8)	3.4	(0.8)	1.1	(0.3)	0.9	(0.3)	2.7	(0.6)	4.6	(0.5)	64.5	(5.3)
	Switzerland	77.0	(1.5)	0.6	(0.2)	1.6	(0.3)	9.3	(0.7)	0.5	(0.2)	2.7	(0.4)	2.4	(0.4)	6.0	(0.7)	61.5	(4.4)
	Turkey	94.9	(1.3)	0.1	(0.1)	1.7	(0.6)	1.7	(0.6)	0.1	(0.1)	0.4	(0.2)	0.8	(0.4)	0.4	(0.2)	42.8	(14.3)
	United Kingdom	83.8	(0.9)	2.6	(0.4)	2.6	(0.3)	1.4	(0.3)	2.7	(0.4)	1.6	(0.3)	0.7	(0.2)	4.6	(0.5)	40.3	(3.5)
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average	82.7	(0.2)	1.1	(0.1)	3.7	(0.1)	3.7	(0.1)	1.2	(0.1)	1.5	(0.1)	1.9	(0.1)	4.1	(0.1)	50.1	(1.2)
Partners	Argentina	97.7	(0.7)	0.1	(0.1)	1.0	(0.3)	0.7	(0.5)	0.0	(0.0)	0.2	(0.2)	0.1	(0.2)	0.1	(0.1)	17.1	(21.0)
	Azerbaijan	99.1	(0.3)	a	a	0.0	(0.0)	0.8	(0.3)	a	a	a	a	0.1	(0.0)	a	a	a	a
	Brazil	98.2	(0.4)	0.1	(0.1)	1.0	(0.3)	0.3	(0.1)	0.1	(0.1)	0.1	(0.1)	0.2	(0.1)	0.2	(0.1)	41.3	(18.0)
	Bulgaria	94.5	(1.1)	1.0	(0.4)	1.6	(0.5)	1.0	(0.4)	0.5	(0.3)	0.7	(0.3)	0.2	(0.1)	0.5	(0.2)	19.4	(5.2)
	Chile	95.5	(0.9)	0.6	(0.3)	2.9	(0.6)	0.1	(0.1)	0.5	(0.3)	0.1	(0.1)	0.2	(0.1)	0.2	(0.1)	13.7	(7.8)
	Colombia	99.0	(0.5)	0.1	(0.1)	0.7	(0.4)	0.2	(0.1)	0.0	(0.0)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	29.9	(46.6)
	Croatia	91.8	(0.9)	1.3	(0.3)	2.5	(0.5)	0.7	(0.3)	1.4	(0.4)	0.6	(0.3)	0.3	(0.2)	1.4	(0.3)	30.2	(6.8)
	Estonia	83.4	(1.3)	2.3	(0.4)	2.0	(0.5)	2.6	(0.4)	1.2	(0.3)	2.4	(0.5)	0.8	(0.4)	5.2	(0.8)	46.5	(4.9)
	Hong Kong-China	70.1	(1.9)	1.0	(0.4)	3.6	(0.5)	8.4	(1.1)	0.7	(0.3)	3.7	(0.5)	3.6	(0.8)	8.9	(0.9)	61.9	(3.7)
	Indonesia	99.7	(0.2)	1.1	(0.3)	0.1	(0.1)	0.2	(0.1)	0.0	(0.0)	a	a	0.0	(0.0)	4.5	(0.7)	0.0	(0.0)
	Israel	91.0	(1.1)	1.0	(0.2)	2.5	(0.6)	1.9	(0.4)	1.0	(0.2)	0.5	(0.2)	0.7	(0.3)	1.1	(0.2)	30.7	(6.7)
	Jordan	99.0	(0.2)	a	a	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.1)	0.0	(0.0)	a	a	4.6	(9.5)
	Kyrgyzstan	99.9	(0.1)	a	a	0.1	(0.1)	0.0	(0.0)	a	a	0.0	(0.0)	0.0	(0.0)	a	a	0.0	(0.0)
	Latvia	90.0	(1.0)	0.8	(0.3)	3.0	(0.5)	2.0	(0.5)	0.6	(0.2)	0.7	(0.2)	1.2	(0.3)	1.7	(0.4)	43.5	(7.1)
	Liechtenstein	77.5	(3.2)	0.8	(0.7)	2.0	(1.5)	6.3	(2.0)	0.8	(0.8)	1.2	(0.9)	2.0	(1.4)	9.7	(2.4)	78.8	(11.7)
	Lithuania	88.0	(1.1)	0.8	(0.3)	2.4	(0.6)	3.2	(0.7)	0.4	(0.2)	1.5	(0.4)	1.0	(0.4)	2.7	(0.5)	49.9	(5.1)
	Macao-China	83.8	(0.9)	0.6	(0.3)	1.3	(0.3)	9.8	(1.1)	0.1	(0.1)	2.2	(0.4)	1.1	(0.2)	1.1	(0.3)	28.2	(6.6)
	Montenegro	98.7	(0.3)	0.0	(0.0)	0.4	(0.2)	0.5	(0.2)	0.2	(0.2)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	40.4	(35.8)
	Qatar	99.1	(0.2)	0.1	(0.1)	0.4	(0.1)	0.2	(0.1)	0.1	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.1)	35.0	(20.8)
	Romania	98.8	(0.4)	0.1	(0.1)	0.4	(0.2)	0.6	(0.3)	0.1	(0.0)	0.1	(0.1)	0.1	(0.1)	0.0	(0.0)	3.4	(10.2)
	Russian Federation	91.5	(0.9)	0.9	(0.2)	1.0	(0.2)	3.8	(0.6)	0.2	(0.1)	1.5	(0.4)	0.3	(0.1)	0.7	(0.2)	21.5	(5.5)
	Serbia	97.5	(0.5)	0.2	(0.1)	0.2	(0.1)	1.6	(0.5)	0.1	(0.1)	0.2	(0.1)	0.1	(0.1)	0.1	(0.1)	9.2	(11.2)
	Slovenia	81.7	(1.0)	2.8	(0.4)	1.1	(0.4)	3.5	(0.7)	1.9	(0.4)	4.2	(0.6)	0.5	(0.2)	4.3	(0.6)	32.5	(3.9)
	Chinese Taipei	70.0	(2.1)	0.8	(0.2)	0.3	(0.1)	15.6	(1.2)	0.2	(0.1)	7.6	(0.8)	0.8	(0.3)	4.8	(0.8)	36.1	(4.0)
	Thailand	98.5	(0.3)	0.1	(0.1)	0.2	(0.1)	0.9	(0.3)	0.0	(0.0)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	19.8	(14.6)
	Tunisia	99.5	(0.3)	0.1	(0.1)	0.1	(0.1)	0.2	(0.2)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	a	a	0.0	(0.0)
	Uruguay	94.6	(0.6)	0.3	(0.3)	2.7	(0.5)	1.2	(0.4)	0.3	(0.2)	0.1	(0.1)	0.5	(0.2)	0.3	(0.1)	28.2	(15.0)



[Part 2/2]

Table A2.1b Overlapping of top performers in science, reading and mathematics, by gender

		Males																	
		Males who are:																Percentage of male top performers in science, who are top performers in reading and mathematics as well	
		not top performers in any of the three domains		top performers only in science		top performers only in reading		top performers only in mathematics		top performers in science and reading but not in mathematics		top performers in science and mathematics but not in reading		top performers in reading and mathematics but not in science		top performers in all three domains			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	76.9	(1.3)	2.8	(0.3)	0.3	(0.1)	6.3	(0.6)	0.4	(0.1)	6.0	(0.4)	0.8	(0.2)	6.4	(0.7)	41.0	(2.7)
	Austria	78.5	(1.5)	1.3	(0.3)	0.4	(0.1)	9.2	(0.9)	0.4	(0.2)	5.3	(0.8)	0.7	(0.3)	4.2	(0.5)	37.1	(4.1)
	Belgium	73.3	(1.1)	0.6	(0.2)	0.9	(0.2)	12.8	(0.8)	0.3	(0.1)	4.6	(0.4)	1.9	(0.3)	5.6	(0.4)	50.4	(3.3)
	Canada	73.7	(1.0)	2.9	(0.4)	1.5	(0.2)	7.5	(0.6)	1.0	(0.3)	4.7	(0.5)	1.7	(0.4)	7.1	(0.5)	45.5	(2.5)
	Czech Republic	78.7	(1.4)	1.3	(0.4)	0.5	(0.3)	8.1	(0.7)	0.3	(0.2)	5.6	(0.7)	0.8	(0.3)	4.7	(0.6)	39.5	(3.7)
	Denmark	83.2	(1.1)	0.8	(0.4)	0.5	(0.3)	7.9	(0.7)	0.4	(0.2)	4.0	(0.8)	0.7	(0.3)	2.6	(0.7)	33.4	(7.2)
	Finland	67.7	(1.4)	3.4	(0.5)	0.5	(0.3)	9.4	(0.8)	0.6	(0.2)	9.9	(0.9)	0.8	(0.3)	7.7	(0.7)	35.6	(3.0)
	France	81.9	(1.3)	1.7	(0.3)	1.2	(0.4)	6.5	(0.9)	0.7	(0.3)	4.3	(0.6)	0.8	(0.3)	2.9	(0.5)	30.4	(4.0)
	Germany	78.0	(1.5)	2.2	(0.4)	0.6	(0.2)	6.8	(0.9)	0.5	(0.3)	6.0	(0.7)	0.9	(0.3)	5.0	(0.7)	36.3	(3.6)
	Greece	91.3	(0.9)	1.2	(0.3)	0.7	(0.4)	3.8	(0.5)	0.4	(0.1)	1.4	(0.3)	0.3	(0.2)	1.0	(0.3)	23.9	(5.7)
	Hungary	85.4	(1.2)	1.5	(0.3)	0.3	(0.2)	5.6	(0.8)	0.3	(0.1)	4.4	(0.8)	0.3	(0.2)	2.3	(0.4)	26.8	(4.3)
	Iceland	85.0	(1.0)	1.0	(0.2)	0.5	(0.2)	7.2	(0.8)	0.2	(0.1)	3.1	(0.5)	0.6	(0.3)	2.4	(0.4)	36.5	(4.8)
	Ireland	83.2	(1.4)	1.9	(0.4)	1.6	(0.5)	3.9	(0.7)	1.1	(0.4)	2.3	(0.4)	1.0	(0.3)	5.0	(0.7)	48.8	(3.7)
	Italy	88.6	(0.8)	1.3	(0.2)	1.4	(0.2)	4.1	(0.5)	0.4	(0.1)	2.4	(0.3)	0.6	(0.1)	1.4	(0.3)	25.5	(4.1)
	Japan	73.0	(1.6)	3.1	(0.5)	0.6	(0.3)	8.4	(0.9)	0.6	(0.2)	7.4	(0.7)	1.1	(0.3)	5.8	(0.7)	34.4	(3.7)
	Korea	67.0	(2.1)	0.3	(0.2)	2.4	(0.4)	13.7	(1.2)	0.5	(0.2)	2.8	(0.8)	5.9	(0.8)	7.6	(0.9)	68.4	(4.8)
	Luxembourg	85.1	(0.9)	0.9	(0.2)	0.4	(0.2)	6.5	(0.7)	0.4	(0.2)	3.3	(0.5)	0.7	(0.2)	2.7	(0.4)	36.6	(5.7)
	Mexico	98.5	(0.3)	0.1	(0.1)	0.2	(0.1)	0.9	(0.3)	0.0	(0.0)	0.2	(0.1)	0.1	(0.0)	0.0	(0.0)	9.4	(5.8)
	Netherlands	74.3	(1.3)	1.4	(0.3)	0.3	(0.1)	9.4	(1.0)	0.3	(0.2)	7.6	(0.9)	1.0	(0.3)	5.6	(0.7)	37.4	(3.9)
	New Zealand	73.5	(1.3)	2.2	(0.4)	1.3	(0.4)	5.9	(0.7)	1.1	(0.4)	6.0	(0.7)	0.9	(0.4)	9.1	(0.9)	49.6	(3.8)
	Norway	85.4	(1.2)	1.0	(0.2)	1.2	(0.3)	5.9	(0.7)	0.4	(0.2)	2.6	(0.5)	0.8	(0.2)	2.7	(0.4)	40.8	(4.7)
	Poland	83.1	(1.2)	1.2	(0.3)	2.4	(0.4)	4.8	(0.6)	0.6	(0.2)	2.2	(0.4)	1.6	(0.3)	4.1	(0.5)	50.1	(4.8)
	Portugal	90.6	(0.9)	0.5	(0.2)	0.8	(0.2)	3.8	(0.4)	0.2	(0.2)	1.5	(0.4)	0.7	(0.3)	1.7	(0.4)	43.1	(7.1)
	Slovak Republic	85.2	(1.2)	1.0	(0.4)	0.5	(0.2)	6.9	(0.9)	0.3	(0.1)	3.3	(0.5)	0.6	(0.2)	2.2	(0.4)	32.3	(4.3)
	Spain	89.1	(0.8)	1.6	(0.3)	0.2	(0.1)	4.9	(0.5)	0.1	(0.1)	3.3	(0.3)	0.2	(0.1)	0.7	(0.2)	12.1	(2.8)
	Sweden	83.1	(1.2)	1.2	(0.3)	1.6	(0.4)	5.6	(0.8)	0.6	(0.2)	3.2	(0.6)	1.2	(0.3)	3.6	(0.5)	41.7	(4.8)
	Switzerland	74.1	(1.3)	0.8	(0.2)	0.2	(0.1)	13.9	(1.0)	0.2	(0.1)	6.1	(0.6)	0.7	(0.2)	4.1	(0.5)	36.8	(3.3)
	Turkey	94.3	(1.5)	0.1	(0.1)	0.5	(0.3)	3.7	(1.0)	0.1	(0.0)	0.4	(0.2)	0.5	(0.2)	0.3	(0.3)	34.3	(21.4)
	United Kingdom	79.8	(0.9)	4.4	(0.5)	0.7	(0.2)	3.1	(0.5)	1.2	(0.3)	5.3	(0.6)	0.4	(0.2)	5.2	(0.4)	32.7	(2.2)
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average	81.4	(0.2)	1.5	(0.1)	0.8	(0.1)	6.8	(0.1)	0.5	(0.0)	4.1	(0.1)	1.0	(0.1)	3.9	(0.1)	36.9	(1.1)
Partners	Argentina	98.4	(0.5)	0.2	(0.1)	0.3	(0.3)	0.7	(0.3)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	13.3	(11.2)
	Azerbaijan	98.9	(0.5)	a	a	0.2	(0.1)	0.9	(0.4)	a	a	0.0	(0.0)	0.0	(0.0)	a	a	a	a
	Brazil	98.0	(0.6)	0.2	(0.1)	0.4	(0.1)	0.6	(0.2)	0.1	(0.1)	0.3	(0.2)	0.2	(0.1)	0.3	(0.2)	33.4	(18.7)
	Bulgaria	94.4	(1.1)	1.3	(0.4)	0.4	(0.2)	1.8	(0.5)	0.3	(0.2)	1.2	(0.4)	0.1	(0.1)	0.6	(0.3)	17.2	(8.4)
	Chile	94.4	(1.1)	0.9	(0.3)	2.0	(0.6)	0.8	(0.3)	0.4	(0.2)	0.5	(0.2)	0.4	(0.2)	0.6	(0.3)	24.3	(8.8)
	Colombia	99.0	(0.3)	0.1	(0.1)	0.3	(0.2)	0.4	(0.3)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.1	(0.1)	13.3	(21.8)
	Croatia	91.6	(0.8)	1.5	(0.3)	0.3	(0.1)	2.5	(0.5)	0.2	(0.2)	2.5	(0.4)	0.1	(0.1)	1.3	(0.3)	23.0	(4.4)
	Estonia	83.2	(1.1)	2.7	(0.5)	0.1	(0.1)	4.9	(0.6)	0.2	(0.2)	6.3	(0.7)	0.1	(0.1)	2.7	(0.4)	22.7	(3.0)
	Hong Kong-China	66.9	(1.7)	1.2	(0.3)	0.7	(0.2)	13.5	(1.3)	0.3	(0.1)	9.6	(0.9)	1.3	(0.4)	6.5	(0.9)	36.9	(3.4)
	Indonesia	99.4	(0.3)	a	a	0.0	(0.0)	0.5	(0.3)	a	a	0.1	(0.0)	0.1	(0.0)	a	a	0.0	(0.0)
	Israel	88.2	(1.2)	2.0	(0.5)	1.1	(0.3)	3.5	(0.7)	0.8	(0.2)	1.7	(0.4)	0.6	(0.3)	2.1	(0.4)	32.2	(4.9)
	Jordan	99.1	(0.3)	0.4	(0.2)	0.1	(0.1)	0.2	(0.2)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.0	(0.0)	2.8	(5.2)
	Kyrgyzstan	99.9	(0.1)	0.0	(0.1)	0.0	(0.0)	0.1	(0.1)	a	a	0.0	(0.0)	0.0	(0.0)	a	a	0.0	(0.0)
	Latvia	90.6	(1.1)	0.8	(0.2)	0.7	(0.4)	4.0	(0.6)	0.2	(0.1)	2.1	(0.5)	0.3	(0.1)	1.2	(0.3)	28.6	(7.5)
	Liechtenstein	81.1	(3.1)	a	a	1.1	(1.0)	6.7	(2.6)	0.6	(0.6)	6.7	(2.6)	a	a	4.3	(2.1)	36.6	(18.6)
	Lithuania	89.0	(1.1)	0.5	(0.2)	0.5	(0.2)	5.7	(0.7)	0.2	(0.1)	2.5	(0.5)	0.2	(0.2)	1.4	(0.4)	30.6	(7.2)
	Macao-China	78.6	(1.1)	0.5	(0.2)	0.3	(0.2)	14.0	(1.2)	0.1	(0.1)	4.6	(0.6)	0.6	(0.3)	1.4	(0.3)	21.8	(5.1)
	Montenegro	98.9	(0.3)	0.1	(0.1)	a	a	0.7	(0.3)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	47.1	(29.6)
	Qatar	98.8	(0.2)	0.1	(0.1)	0.1	(0.1)	0.5	(0.2)	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	0.2	(0.1)	42.1	(21.7)
	Romania	97.9	(0.5)	0.2	(0.1)	0.1	(0.1)	1.3	(0.3)	0.0	(0.0)	0.5	(0.2)	a	a	0.0	(0.0)	5.1	(6.0)
	Russian Federation	89.5	(1.1)	1.6	(0.5)	0.2	(0.1)	5.0	(0.7)	0.1	(0.1)	2.9	(0.4)	0.2	(0.1)	0.6	(0.2)	11.0	(4.1)
	Serbia	96.0	(0.6)	0.3	(0.2)	0.0	(0.0)	2.8	(0.6)	a	a	0.7	(0.3)	0.1	(0.1)	0.1	(0.0)	5.4	(5.5)
	Slovenia	82.1	(0.9)	2.7	(0.6)	0.1	(0.1)	5.0	(0.8)	0.2	(0.2)	7.4	(0.7)	0.1	(0.1)	2.4	(0.5)	18.6	(3.6)
	Chinese Taipei	64.3	(1.8)	0.9	(0.2)	0.0	(0.0)	19.6	(1.0)	0.1	(0.0)	11.7	(0.9)	0.3	(0.1)	3.1	(0.6)	19.8	(2.6)
	Thailand	98.2	(0.4)	0.1	(0.1)	0.1	(0.1)	1.3	(0.4)	a	a	0.3	(0.2)	0.0	(0.0)	0.1	(0.1)	12.2	(16.1)
	Tunisia	99.1	(0.4)	0.1	(0.1)	0.1	(0.1)	0.6	(0.4)	a	a	0.1	(0.1)	0.1	(0.1)	0.1	(0.1)	10.4	(29.9)
	Uruguay	93.7	(0.7)	0.5	(0.2)	1.2	(0.4)	2.8	(0.4)	0.2	(0.1)	0.6	(0.2)	0.4	(0.1)	0.6	(0.2)	28.9	(8.6)

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[Part 1/3]

Table A2.2 Percentage of students by performance group in science, reading and mathematics, by gender

		Science																
		Females								Males								Difference in the percentages of top performers between females and males	
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.
OECD	Australia	11.8	(0.7)	49.7	(0.9)	25.0	(0.7)	13.6	(0.8)	13.9	(0.8)	46.3	(0.9)	24.2	(0.7)	15.6	(1.0)	-2.1	(1.3)
	Austria	17.5	(2.0)	49.8	(2.3)	24.1	(1.6)	8.6	(0.9)	15.2	(1.5)	50.3	(1.6)	23.3	(1.4)	11.3	(1.0)	**-2.6**	(1.2)
	Belgium	16.0	(1.2)	50.7	(1.4)	24.4	(1.2)	8.9	(0.7)	17.9	(1.3)	46.4	(1.4)	24.5	(0.9)	11.2	(0.7)	**-2.3**	(0.9)
	Canada	9.4	(0.7)	50.2	(1.1)	27.2	(0.9)	13.2	(0.7)	10.6	(0.8)	45.6	(1.0)	28.1	(0.9)	15.7	(0.7)	**-2.5**	(0.9)
	Czech Republic	17.1	(1.6)	49.5	(1.6)	22.2	(1.3)	11.2	(1.3)	14.3	(1.3)	52.5	(1.5)	21.4	(1.4)	11.9	(1.1)	-0.7	(1.4)
	Denmark	19.0	(1.4)	57.1	(1.3)	18.1	(1.1)	5.8	(0.6)	17.8	(1.3)	53.5	(1.3)	21.0	(1.2)	7.8	(1.0)	**-2.0**	(1.0)
	Finland	3.2	(0.6)	42.9	(1.3)	33.7	(1.2)	20.2	(1.0)	5.0	(0.6)	42.6	(1.2)	30.8	(1.1)	21.6	(1.1)	-1.4	(1.4)
	France	20.4	(1.5)	52.3	(1.9)	20.8	(1.3)	6.5	(0.9)	22.0	(1.7)	47.5	(1.9)	20.9	(1.3)	9.6	(0.9)	**-3.2**	(1.2)
	Germany	15.8	(1.5)	51.0	(1.3)	23.3	(1.1)	9.8	(0.8)	14.9	(1.5)	47.6	(1.5)	23.8	(1.4)	13.7	(1.1)	**-3.8**	(1.3)
	Greece	19.9	(1.3)	63.2	(1.4)	14.1	(1.1)	2.8	(0.5)	28.1	(1.9)	53.6	(1.7)	14.2	(1.1)	4.0	(0.5)	-1.2	(0.7)
	Hungary	14.5	(1.3)	60.5	(1.5)	19.8	(1.3)	5.2	(0.8)	15.5	(1.3)	54.0	(1.8)	22.0	(1.1)	8.4	(1.0)	**-3.3**	(1.2)
	Iceland	18.7	(1.0)	56.5	(1.3)	18.8	(1.0)	6.0	(0.7)	22.4	(1.1)	51.8	(1.2)	19.2	(1.1)	6.6	(0.7)	-0.6	(1.0)
	Ireland	14.5	(1.1)	55.4	(1.3)	21.6	(1.2)	8.5	(0.8)	16.5	(1.5)	52.0	(1.6)	21.1	(1.1)	10.3	(1.0)	-1.8	(1.1)
	Italy	25.0	(1.1)	56.7	(1.1)	14.4	(0.7)	3.8	(0.4)	25.5	(1.2)	53.3	(1.1)	15.8	(0.7)	5.4	(0.5)	**-1.6**	(0.6)
	Japan	11.3	(1.5)	48.1	(1.6)	27.5	(1.6)	13.1	(1.0)	12.8	(1.4)	43.8	(1.3)	26.5	(1.5)	17.0	(1.1)	**-3.8**	(1.6)
	Korea	10.1	(1.3)	54.9	(1.8)	25.5	(1.3)	9.5	(1.1)	12.4	(1.5)	51.1	(1.7)	25.5	(1.3)	11.1	(1.4)	-1.6	(1.3)
	Luxembourg	22.2	(1.1)	56.9	(1.2)	16.5	(0.9)	4.4	(0.5)	22.0	(1.0)	51.0	(1.4)	19.6	(1.1)	7.3	(0.6)	**-2.9**	(0.9)
	Mexico	52.2	(1.4)	44.9	(1.3)	2.6	(0.4)	0.2	(0.1)	49.5	(1.7)	46.3	(1.6)	3.8	(0.4)	0.3	(0.1)	-0.1	(0.1)
	Netherlands	13.7	(1.4)	48.2	(1.5)	26.8	(1.3)	11.2	(0.8)	12.2	(1.1)	47.9	(1.4)	24.9	(1.3)	15.0	(1.1)	**-3.7**	(1.1)
	New Zealand	12.2	(0.8)	46.0	(1.4)	24.9	(1.1)	16.9	(1.1)	15.3	(1.1)	43.4	(1.2)	22.8	(1.1)	18.4	(1.1)	-1.5	(1.6)
	Norway	19.6	(1.3)	57.4	(1.5)	17.5	(1.2)	5.5	(0.7)	22.4	(1.6)	54.2	(1.4)	16.7	(1.2)	6.7	(0.7)	-1.2	(1.0)
	Poland	16.7	(1.0)	58.4	(1.2)	19.5	(1.1)	5.4	(0.6)	17.3	(1.0)	55.4	(1.2)	19.1	(1.1)	8.1	(0.7)	**-2.7**	(0.8)
	Portugal	24.7	(1.6)	59.0	(1.4)	14.0	(1.2)	2.3	(0.3)	24.2	(1.8)	56.2	(1.7)	15.5	(1.0)	4.0	(0.6)	**-1.8**	(0.6)
	Slovak Republic	20.3	(1.5)	58.0	(1.6)	17.0	(1.3)	4.8	(0.5)	20.1	(1.4)	54.4	(1.6)	18.8	(1.4)	6.7	(0.8)	**-2.0**	(0.9)
	Spain	19.7	(1.1)	59.1	(1.1)	17.1	(0.9)	4.1	(0.5)	19.6	(1.1)	56.1	(0.9)	18.7	(1.0)	5.6	(0.5)	**-1.5**	(0.6)
	Sweden	15.5	(0.9)	56.8	(1.6)	20.6	(1.3)	7.2	(0.8)	17.2	(1.2)	52.7	(1.4)	21.5	(1.1)	8.6	(0.7)	-1.4	(1.1)
	Switzerland	16.6	(1.1)	50.6	(1.5)	23.0	(1.3)	9.8	(1.0)	15.6	(1.0)	49.3	(1.3)	24.0	(1.2)	11.1	(0.9)	-1.3	(0.9)
	Turkey	42.3	(2.2)	50.7	(2.0)	6.1	(1.2)	0.9	(0.4)	50.1	(2.0)	42.7	(1.8)	6.2	(1.3)	0.9	(0.4)	0.0	(0.4)
	United Kingdom	16.7	(1.0)	50.7	(1.1)	21.1	(1.0)	11.5	(0.8)	16.7	(1.0)	44.7	(1.1)	22.5	(0.8)	16.0	(0.9)	**-4.5**	(1.1)
	United States	23.0	(1.5)	50.8	(1.4)	18.0	(1.0)	8.2	(0.9)	25.8	(2.0)	45.7	(1.6)	18.6	(1.3)	10.0	(1.0)	-1.7	(1.1)
	OECD average	18.7	(0.2)	53.2	(0.3)	20.2	(0.2)	8.0	(0.1)	19.8	(0.2)	49.7	(0.3)	20.5	(0.2)	10.0	(0.2)	-2.0	(0.2)
Partners	Argentina	54.0	(3.0)	40.9	(2.5)	4.6	(0.9)	0.5	(0.2)	58.8	(2.6)	37.3	(2.4)	3.4	(0.6)	0.4	(0.2)	0.0	(0.3)
	Azerbaijan	70.2	(2.0)	29.4	(2.0)	0.4	(0.2)	a	a	74.6	(2.1)	24.9	(2.1)	0.4	(0.2)	0.0	(0.0)	0.0	(0.0)
	Brazil	63.3	(1.6)	33.5	(1.5)	2.8	(0.5)	0.4	(0.2)	58.4	(1.5)	36.8	(1.3)	4.0	(0.5)	0.8	(0.3)	-0.4	(0.3)
	Bulgaria	38.3	(2.8)	47.5	(2.1)	11.4	(1.5)	2.8	(0.6)	46.7	(2.8)	40.7	(2.1)	9.2	(1.2)	3.3	(0.8)	-0.6	(0.6)
	Chile	44.3	(2.2)	47.7	(1.9)	6.6	(1.0)	1.3	(0.5)	35.8	(2.5)	51.9	(1.9)	9.9	(1.3)	2.4	(0.6)	-1.1	(0.8)
	Colombia	62.6	(2.4)	35.9	(2.3)	1.4	(0.4)	0.1	(0.1)	57.4	(2.3)	39.9	(2.3)	2.5	(0.5)	0.2	(0.1)	-0.1	(0.2)
	Croatia	15.7	(1.3)	62.1	(1.3)	17.5	(1.2)	4.8	(0.6)	18.2	(1.3)	58.5	(1.3)	17.9	(1.0)	5.4	(0.5)	-0.7	(0.7)
	Estonia	6.7	(0.7)	55.2	(1.5)	27.0	(1.3)	11.2	(1.0)	8.6	(0.9)	54.2	(1.5)	25.4	(1.4)	11.8	(1.0)	-0.6	(1.2)
	Hong Kong-China	8.2	(0.9)	48.4	(1.8)	29.1	(1.3)	14.3	(1.2)	9.3	(1.1)	42.8	(1.5)	30.4	(1.3)	17.6	(1.3)	-3.2	(1.7)
	Indonesia	64.7	(2.5)	34.3	(2.4)	1.0	(0.4)	0.0	(0.0)	58.7	(4.8)	39.5	(4.1)	1.8	(0.8)	0.1	(0.0)	0.0	(0.1)
	Israel	34.9	(1.7)	48.3	(1.6)	12.9	(1.0)	3.9	(0.5)	37.4	(2.0)	41.3	(1.3)	14.7	(1.2)	6.6	(0.9)	**-2.8**	(0.9)
	Jordan	37.9	(1.7)	54.9	(1.6)	6.5	(0.7)	0.7	(0.2)	50.8	(1.8)	44.0	(1.5)	4.6	(0.9)	0.6	(0.3)	0.1	(0.3)
	Kyrgyzstan	86.5	(1.2)	13.0	(1.1)	0.5	(0.2)	0.0	(0.0)	86.1	(1.1)	12.9	(1.0)	1.0	(0.3)	0.0	(0.1)	0.0	(0.0)
	Latvia	15.8	(1.3)	62.6	(1.4)	17.7	(1.2)	3.9	(0.5)	19.1	(1.3)	61.2	(1.6)	15.4	(1.2)	4.3	(0.6)	-0.5	(0.7)
	Liechtenstein	12.6	(2.7)	46.1	(3.5)	29.0	(3.7)	12.3	(2.5)	13.2	(3.9)	53.8	(6.3)	20.8	(4.1)	12.2	(2.6)	0.1	(3.8)
	Lithuania	18.5	(1.3)	58.0	(1.7)	18.1	(1.2)	5.4	(0.8)	22.1	(1.2)	56.5	(1.5)	16.9	(1.1)	4.6	(0.7)	0.8	(0.7)
	Macao-China	9.2	(0.7)	64.8	(1.1)	22.0	(1.1)	4.0	(0.5)	11.3	(0.7)	58.6	(1.5)	23.5	(1.6)	6.6	(0.6)	**-2.5**	(0.8)
	Montenegro	49.6	(1.2)	46.4	(1.3)	3.8	(0.5)	0.2	(0.2)	50.8	(1.3)	45.4	(1.4)	3.5	(0.5)	0.3	(0.2)	-0.1	(0.2)
	Qatar	74.2	(0.7)	24.2	(0.8)	1.4	(0.2)	0.2	(0.1)	83.9	(0.6)	13.8	(0.7)	1.9	(0.2)	0.4	(0.1)	-0.2	(0.2)
	Romania	45.5	(3.0)	50.4	(2.7)	3.9	(1.0)	0.2	(0.1)	48.3	(2.3)	46.3	(2.2)	4.6	(0.8)	0.7	(0.3)	-0.5	(0.3)
	Russian Federation	21.8	(1.6)	60.2	(1.2)	14.6	(1.1)	3.4	(0.5)	22.6	(1.6)	56.8	(1.6)	15.6	(1.4)	5.1	(0.7)	**-1.7**	(0.7)
	Serbia	36.2	(2.1)	56.6	(2.0)	6.6	(0.7)	0.6	(0.2)	40.8	(1.8)	51.7	(1.6)	6.5	(0.7)	1.0	(0.3)	-0.5	(0.3)
	Slovenia	12.5	(0.8)	50.9	(1.1)	23.5	(1.4)	13.1	(1.0)	15.3	(0.8)	50.5	(1.6)	21.5	(1.5)	12.7	(1.0)	0.5	(1.6)
	Chinese Taipei	11.6	(1.3)	48.2	(1.8)	26.9	(1.5)	13.4	(1.3)	11.7	(1.2)	43.7	(1.5)	28.8	(1.2)	15.8	(1.3)	-2.4	(2.0)
	Thailand	41.9	(1.5)	53.7	(1.5)	4.1	(0.5)	0.4	(0.1)	51.8	(1.8)	43.9	(1.6)	3.8	(0.6)	0.5	(0.2)	-0.1	(0.3)
	Tunisia	62.0	(1.7)	36.0	(1.5)	1.8	(0.6)	0.1	(0.1)	63.6	(1.6)	34.3	(1.5)	2.0	(0.5)	0.1	(0.1)	0.0	(0.2)
	Uruguay	40.4	(1.5)	52.2	(1.5)	6.5	(0.7)	1.0	(0.3)	44.0	(2.0)	46.7	(1.8)	7.3	(0.7)	1.9	(0.4)	-0.9	(0.5)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 2/3]

Table A2.2 Percentage of students by performance group in science, reading and mathematics, by gender

		Reading																
		Females								Males								Difference in the percentages of top performers between females and males
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers		
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.
OECD	Australia	26.5	(1.0)	31.1	(0.9)	28.9	(0.8)	13.4	(0.8)	42.0	(1.2)	29.1	(0.7)	21.0	(0.8)	7.9	(0.8)	**5.5**	(1.2)
	Austria	35.1	(2.0)	27.1	(1.4)	25.3	(1.4)	12.4	(1.2)	51.7	(1.9)	25.2	(1.2)	17.5	(1.2)	5.7	(0.6)	**6.7**	(1.2)
	Belgium	30.5	(1.5)	27.0	(1.2)	28.4	(1.5)	14.1	(1.0)	45.4	(1.5)	25.1	(1.0)	20.8	(0.9)	8.7	(0.6)	**5.4**	(1.2)
	Canada	22.7	(0.9)	29.5	(0.9)	30.0	(1.1)	17.7	(1.0)	35.1	(1.3)	29.3	(1.4)	24.3	(0.9)	11.3	(0.8)	**6.5**	(1.1)
	Czech Republic	36.9	(2.1)	26.5	(1.6)	23.8	(1.3)	12.9	(1.3)	54.8	(2.1)	23.0	(1.2)	15.9	(1.4)	6.3	(0.7)	**6.6**	(1.3)
	Denmark	35.2	(1.6)	33.2	(1.2)	23.9	(1.3)	7.6	(0.8)	48.2	(1.6)	30.3	(1.4)	17.3	(1.0)	4.1	(0.7)	**3.5**	(0.9)
	Finland	11.0	(0.8)	27.9	(1.2)	37.4	(1.1)	23.7	(1.3)	29.8	(1.3)	34.5	(1.2)	26.0	(1.3)	9.6	(0.8)	**14.1**	(1.4)
	France	36.5	(1.8)	29.4	(1.5)	25.1	(1.4)	8.9	(0.9)	50.0	(2.2)	26.2	(1.7)	18.3	(1.6)	5.5	(0.8)	**3.3**	(0.9)
	Germany	32.4	(1.8)	28.3	(1.2)	26.4	(1.3)	12.9	(1.0)	47.8	(2.2)	26.3	(1.2)	18.9	(1.4)	7.0	(0.8)	**6.0**	(1.1)
	Greece	43.7	(1.8)	33.1	(1.5)	18.5	(1.3)	4.7	(0.7)	64.8	(2.1)	22.8	(1.4)	10.1	(0.9)	2.3	(0.4)	**2.4**	(0.7)
	Hungary	36.7	(2.1)	34.0	(1.4)	22.8	(1.4)	6.5	(0.8)	54.3	(1.9)	27.4	(1.4)	15.2	(1.1)	3.1	(0.5)	**3.4**	(0.8)
	Iceland	35.5	(1.3)	32.6	(1.2)	23.5	(1.5)	8.3	(0.8)	55.5	(1.4)	26.6	(1.2)	14.3	(1.0)	3.6	(0.6)	**4.7**	(0.9)
	Ireland	26.4	(1.8)	30.3	(1.1)	28.6	(1.6)	14.6	(1.1)	39.8	(2.1)	30.1	(1.4)	21.4	(1.2)	8.7	(1.0)	**5.9**	(1.4)
	Italy	43.4	(1.3)	28.9	(0.9)	21.0	(0.9)	6.7	(0.6)	58.6	(1.2)	23.8	(0.8)	13.9	(0.7)	3.7	(0.4)	**3.0**	(0.7)
	Japan	34.4	(2.3)	30.4	(1.3)	24.5	(1.4)	10.7	(1.2)	46.4	(2.3)	27.0	(1.4)	18.6	(1.2)	8.1	(1.0)	2.5	(1.7)
	Korea	12.8	(1.6)	25.0	(1.4)	34.9	(1.8)	27.3	(2.0)	23.6	(1.9)	29.4	(1.4)	30.7	(1.6)	16.3	(1.3)	**11.0**	(2.3)
	Luxembourg	41.1	(1.0)	29.7	(1.0)	22.1	(1.2)	7.1	(0.7)	53.7	(1.0)	26.2	(1.1)	15.9	(0.7)	4.2	(0.5)	**2.9**	(0.8)
	Mexico	70.7	(1.4)	21.8	(1.1)	6.7	(0.6)	0.8	(0.2)	81.5	(0.9)	14.4	(0.8)	3.8	(0.4)	0.3	(0.2)	**0.4**	(0.2)
	Netherlands	32.4	(1.5)	28.0	(1.2)	28.5	(1.2)	11.1	(0.8)	40.2	(1.8)	29.7	(1.4)	22.9	(1.4)	7.2	(0.8)	**3.9**	(0.9)
	New Zealand	26.7	(1.4)	26.9	(1.1)	27.3	(1.2)	19.1	(1.2)	40.2	(1.6)	25.9	(1.3)	21.5	(1.2)	12.4	(0.9)	**6.7**	(1.5)
	Norway	36.4	(1.5)	30.8	(1.1)	22.5	(1.2)	10.4	(1.0)	54.4	(1.5)	24.6	(1.3)	15.9	(1.0)	5.2	(0.7)	**5.2**	(1.2)
	Poland	29.6	(1.2)	29.3	(1.3)	26.6	(1.0)	14.5	(1.1)	45.9	(1.5)	25.8	(1.2)	19.6	(1.0)	8.7	(0.8)	**5.8**	(1.1)
	Portugal	43.5	(1.7)	30.7	(1.4)	20.1	(1.1)	5.7	(0.7)	57.8	(1.8)	25.5	(1.3)	13.2	(1.0)	3.5	(0.6)	**2.1**	(0.8)
	Slovak Republic	45.0	(1.9)	28.7	(1.7)	19.0	(1.2)	7.3	(0.8)	60.4	(1.8)	23.3	(1.4)	12.7	(0.9)	3.6	(0.5)	**3.7**	(0.8)
	Spain	48.1	(1.2)	33.6	(0.9)	15.9	(0.8)	2.4	(0.4)	63.4	(1.2)	26.0	(1.0)	9.5	(0.8)	1.1	(0.3)	**1.3**	(0.5)
	Sweden	29.1	(1.6)	29.7	(1.3)	26.7	(1.5)	14.5	(1.1)	44.9	(1.5)	28.0	(1.6)	20.1	(1.4)	7.0	(0.8)	**7.5**	(1.0)
	Switzerland	33.2	(1.4)	30.5	(1.2)	25.8	(1.2)	10.4	(1.0)	45.1	(1.6)	30.3	(1.0)	19.5	(1.0)	5.1	(0.6)	**5.3**	(0.9)
	Turkey	54.0	(2.4)	29.6	(1.8)	13.4	(1.2)	2.9	(0.8)	70.8	(2.4)	20.1	(1.7)	7.7	(1.2)	1.4	(0.5)	**1.5**	(0.6)
	United Kingdom	36.4	(1.2)	30.3	(1.0)	22.8	(0.9)	10.6	(0.8)	47.2	(1.3)	27.1	(1.4)	18.2	(1.1)	7.5	(0.6)	**3.1**	(0.8)
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average	35.4	(0.3)	29.5	(0.2)	24.2	(0.2)	11.0	(0.2)	50.1	(0.3)	26.3	(0.2)	17.4	(0.2)	6.2	(0.1)	4.8	(0.2)
Partners	Argentina	73.9	(2.4)	17.9	(1.6)	6.9	(1.1)	1.3	(0.4)	86.1	(1.6)	10.2	(1.4)	3.1	(0.9)	0.6	(0.3)	0.7	(0.5)
	Azerbaijan	95.5	(0.7)	3.9	(0.6)	0.6	(0.2)	0.1	(0.0)	96.3	(0.7)	3.0	(0.6)	0.6	(0.2)	0.2	(0.1)	-0.2	(0.1)
	Brazil	77.4	(1.3)	15.8	(1.1)	5.5	(0.6)	1.3	(0.4)	84.7	(1.2)	10.6	(0.9)	3.8	(0.6)	0.9	(0.3)	0.4	(0.4)
	Bulgaria	65.9	(2.6)	20.6	(1.6)	10.6	(1.4)	2.9	(0.7)	80.5	(2.0)	12.4	(1.4)	5.8	(1.1)	1.3	(0.4)	**1.6**	(0.6)
	Chile	61.4	(2.6)	23.0	(1.5)	11.8	(1.3)	3.7	(0.7)	66.7	(2.5)	19.5	(1.3)	10.4	(1.3)	3.4	(0.8)	0.3	(0.9)
	Colombia	78.9	(1.9)	15.5	(1.6)	4.8	(0.9)	0.8	(0.4)	83.2	(1.5)	13.3	(1.3)	3.2	(0.6)	0.4	(0.2)	0.4	(0.4)
	Croatia	37.6	(1.8)	34.7	(1.3)	22.1	(1.4)	5.6	(0.8)	60.6	(1.8)	26.6	(1.6)	11.0	(0.9)	1.9	(0.4)	**3.7**	(0.9)
	Estonia	28.1	(1.6)	35.0	(1.5)	27.8	(1.4)	9.2	(1.1)	47.7	(1.6)	32.9	(1.2)	16.4	(1.0)	3.0	(0.4)	**6.2**	(1.1)
	Hong Kong-China	17.8	(1.5)	30.2	(1.9)	35.2	(1.6)	16.8	(1.4)	29.7	(1.7)	32.8	(1.5)	28.6	(1.5)	8.8	(1.1)	**8.0**	(1.9)
	Indonesia	86.4	(1.8)	11.6	(1.5)	2.0	(0.5)	0.1	(0.1)	88.3	(3.4)	10.6	(3.2)	1.1	(0.4)	0.0	(0.0)	0.1	(0.1)
	Israel	55.5	(1.8)	24.1	(1.1)	14.9	(1.0)	5.4	(0.7)	67.3	(1.9)	17.7	(1.0)	10.4	(1.0)	4.6	(0.7)	0.8	(0.9)
	Jordan	74.0	(1.8)	21.2	(1.4)	4.5	(0.7)	0.3	(0.1)	86.3	(2.0)	11.6	(1.6)	2.0	(0.6)	0.1	(0.1)	0.2	(0.1)
	Kyrgyzstan	95.4	(0.7)	3.8	(0.6)	0.7	(0.2)	0.1	(0.1)	97.5	(0.5)	2.0	(0.5)	0.4	(0.3)	0.1	(0.1)	0.1	(0.1)
	Latvia	37.8	(1.8)	33.1	(1.6)	22.6	(1.4)	6.5	(0.8)	60.5	(2.1)	26.5	(1.9)	10.5	(1.3)	2.5	(0.5)	**4.1**	(0.9)
	Liechtenstein	26.2	(3.3)	29.1	(3.5)	30.3	(4.5)	14.4	(3.3)	43.6	(4.6)	33.7	(4.3)	18.1	(3.9)	4.6	(2.1)	**9.8**	(4.3)
	Lithuania	41.3	(1.6)	31.1	(1.2)	21.0	(1.2)	6.5	(0.8)	63.4	(1.7)	24.0	(1.4)	10.3	(1.1)	2.3	(0.4)	**4.2**	(0.8)
	Macao-China	35.4	(1.1)	39.1	(1.3)	21.8	(1.0)	3.7	(0.5)	48.2	(1.5)	34.1	(1.9)	15.3	(1.2)	2.4	(0.4)	1.3	(0.8)
	Montenegro	78.0	(1.3)	17.0	(1.3)	4.4	(0.5)	0.7	(0.3)	88.7	(0.9)	9.5	(1.0)	1.6	(0.5)	0.2	(0.1)	0.5	(0.3)
	Qatar	91.0	(0.6)	6.4	(0.5)	1.9	(0.3)	0.6	(0.1)	94.4	(0.4)	3.5	(0.6)	1.6	(0.3)	0.5	(0.2)	0.1	(0.2)
	Romania	75.3	(2.2)	19.7	(1.8)	4.5	(1.0)	0.5	(0.2)	87.6	(1.4)	10.4	(1.2)	1.9	(0.4)	0.1	(0.1)	0.3	(0.2)
	Russian Federation	58.3	(1.9)	28.2	(1.3)	11.2	(1.0)	2.3	(0.4)	72.8	(2.0)	19.4	(1.8)	6.7	(0.8)	1.1	(0.3)	**1.2**	(0.5)
	Serbia	73.7	(1.5)	20.4	(1.3)	5.5	(0.8)	0.4	(0.2)	85.8	(1.0)	11.8	(1.0)	2.3	(0.4)	0.2	(0.1)	0.2	(0.3)
	Slovenia	28.7	(0.9)	34.8	(1.4)	28.8	(1.3)	7.8	(0.9)	53.9	(1.0)	28.3	(1.3)	15.0	(0.9)	2.7	(0.5)	**5.0**	(1.1)
	Chinese Taipei	35.1	(2.3)	34.7	(1.4)	24.1	(1.4)	6.1	(1.0)	43.9	(2.0)	33.3	(1.3)	19.3	(1.2)	3.5	(0.6)	**2.6**	(1.2)
	Thailand	71.8	(1.7)	22.0	(1.3)	5.8	(0.6)	0.4	(0.2)	86.5	(1.1)	11.2	(0.9)	2.1	(0.5)	0.1	(0.1)	0.3	(0.2)
	Tunisia	80.8	(1.6)	15.8	(1.2)	3.2	(0.7)	0.2	(0.1)	88.7	(1.4)	9.1	(1.0)	2.1	(0.6)	0.1	(0.1)	0.0	(0.1)
	Uruguay	63.8	(1.6)	21.4	(1.3)	11.1	(0.9)	3.7	(0.5)	76.5	(1.3)	14.5	(1.0)	6.5	(0.7)	2.4	(0.5)	**1.3**	(0.6)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 3/3]

Table A2.2 Percentage of students by performance group in science, reading and mathematics, by gender

		Mathematics																
		Females								Males								Difference in the percentages of top performers between females and males	
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.
OECD	Australia	13.6	(0.7)	50.4	(1.2)	22.8	(0.8)	13.2	(0.8)	12.4	(0.7)	44.6	(1.0)	23.5	(0.8)	19.5	(1.3)	**-6.3**	(1.4)
	Austria	22.7	(1.7)	44.2	(1.9)	21.1	(1.5)	12.0	(0.9)	17.4	(1.6)	41.6	(1.5)	21.6	(1.3)	19.4	(1.4)	**-7.4**	(1.4)
	Belgium	17.0	(1.2)	40.7	(1.3)	22.8	(1.0)	19.5	(1.1)	17.7	(1.5)	36.4	(1.6)	21.0	(1.1)	24.9	(1.1)	**-5.4**	(1.5)
	Canada	11.3	(0.7)	49.5	(1.0)	24.4	(1.0)	14.8	(0.9)	10.3	(0.7)	42.8	(1.1)	25.9	(0.9)	21.0	(1.0)	**-6.2**	(1.1)
	Czech Republic	21.2	(1.7)	43.0	(1.7)	18.7	(1.4)	17.1	(1.8)	17.6	(1.4)	43.8	(1.6)	19.4	(1.5)	19.2	(1.3)	-2.0	(2.0)
	Denmark	15.2	(1.2)	51.2	(1.3)	21.3	(1.1)	12.3	(1.0)	12.1	(1.3)	49.1	(1.3)	23.7	(1.2)	15.1	(1.0)	**-2.8**	(1.2)
	Finland	5.9	(0.8)	44.6	(1.3)	28.3	(1.2)	21.1	(1.1)	6.0	(0.8)	38.4	(1.3)	27.8	(1.0)	27.8	(1.4)	**-6.7**	(1.4)
	France	22.4	(1.5)	47.5	(1.6)	19.5	(1.3)	10.7	(1.0)	22.1	(1.6)	43.6	(1.6)	19.8	(1.4)	14.5	(1.2)	**-3.8**	(1.5)
	Germany	22.1	(1.5)	46.8	(1.5)	19.1	(1.1)	12.0	(0.9)	17.8	(1.6)	43.8	(1.8)	19.8	(1.4)	18.7	(1.4)	**-6.6**	(1.4)
	Greece	31.9	(1.8)	52.6	(2.1)	11.8	(1.5)	3.6	(0.6)	32.7	(1.8)	47.4	(1.6)	13.4	(1.1)	6.4	(0.7)	**-2.8**	(0.8)
	Hungary	21.5	(1.6)	54.5	(1.9)	16.0	(1.3)	7.9	(1.0)	20.8	(1.2)	48.9	(1.6)	17.7	(1.4)	12.6	(1.2)	**-4.6**	(1.3)
	Iceland	15.3	(0.9)	50.2	(1.2)	22.7	(1.2)	11.9	(1.0)	18.3	(1.2)	47.5	(1.3)	20.7	(1.1)	13.4	(0.9)	-1.5	(1.3)
	Ireland	17.4	(1.3)	54.9	(1.4)	19.4	(1.4)	8.3	(1.0)	15.4	(1.7)	50.4	(1.7)	21.9	(1.1)	12.3	(1.1)	**-4.0**	(1.4)
	Italy	35.5	(1.3)	48.4	(1.1)	11.9	(0.8)	4.1	(0.5)	30.1	(1.2)	46.8	(1.1)	14.8	(0.7)	8.4	(0.7)	**-4.3**	(0.7)
	Japan	14.3	(1.8)	48.8	(1.8)	23.1	(1.4)	13.9	(1.3)	11.8	(1.4)	41.1	(1.6)	24.4	(1.3)	22.7	(1.5)	**-8.8**	(2.0)
	Korea	8.6	(1.3)	41.0	(1.8)	26.2	(1.6)	24.2	(2.0)	9.1	(1.2)	36.3	(1.7)	24.7	(1.4)	29.9	(2.1)	**-5.7**	(2.6)
	Luxembourg	24.5	(1.1)	50.2	(1.5)	17.4	(1.3)	7.9	(0.7)	21.1	(0.9)	46.7	(1.2)	19.0	(1.0)	13.2	(0.8)	**-5.3**	(1.0)
	Mexico	58.8	(1.6)	37.0	(1.4)	3.6	(0.5)	0.5	(0.2)	54.0	(1.5)	39.8	(1.3)	5.0	(0.5)	1.2	(0.3)	**-0.6**	(0.3)
	Netherlands	13.1	(1.3)	43.8	(1.6)	24.6	(1.4)	18.6	(1.2)	10.0	(1.1)	42.7	(1.5)	23.7	(1.2)	23.6	(1.3)	**-5.0**	(1.3)
	New Zealand	14.1	(1.0)	47.4	(1.6)	22.3	(1.3)	16.1	(1.3)	14.0	(1.1)	42.3	(1.3)	21.8	(1.3)	21.9	(1.3)	**-5.8**	(1.8)
	Norway	22.4	(1.4)	52.0	(1.5)	17.0	(1.2)	8.6	(0.9)	22.1	(1.4)	48.0	(1.5)	17.8	(1.1)	12.1	(1.0)	**-3.4**	(1.2)
	Poland	20.5	(1.1)	52.2	(1.2)	18.6	(1.1)	8.6	(0.7)	19.1	(1.0)	49.6	(1.4)	18.6	(1.0)	12.6	(1.1)	**-4.0**	(1.1)
	Portugal	32.7	(1.7)	50.2	(1.5)	13.4	(0.8)	3.7	(0.5)	28.6	(1.7)	48.0	(1.6)	15.5	(1.1)	7.9	(0.8)	**-4.2**	(0.9)
	Slovak Republic	22.9	(1.6)	50.3	(1.8)	18.0	(1.2)	8.9	(1.2)	19.0	(1.2)	48.5	(1.5)	19.6	(1.1)	13.0	(1.2)	**-4.1**	(1.4)
	Spain	25.0	(1.3)	53.5	(1.0)	16.1	(0.8)	5.4	(0.6)	24.4	(1.2)	49.1	(1.2)	17.5	(0.9)	9.0	(0.7)	**-3.7**	(0.7)
	Sweden	18.7	(1.1)	49.8	(1.6)	19.8	(1.6)	11.6	(0.9)	17.9	(1.4)	48.2	(2.1)	20.3	(1.3)	13.5	(1.0)	-1.9	(1.3)
	Switzerland	14.7	(1.1)	42.4	(1.4)	22.5	(1.4)	20.3	(1.5)	12.4	(1.0)	39.0	(1.3)	23.9	(1.0)	24.8	(1.2)	**-4.5**	(1.3)
	Turkey	53.5	(2.3)	36.9	(1.9)	6.4	(1.1)	3.2	(1.0)	50.9	(2.2)	37.2	(1.8)	6.9	(1.1)	5.0	(1.4)	**-1.7**	(0.7)
	United Kingdom	21.2	(1.1)	53.9	(1.1)	16.5	(0.8)	8.4	(0.7)	18.3	(1.1)	48.1	(1.0)	19.7	(0.8)	13.9	(0.8)	**-5.6**	(1.0)
	United States	28.9	(1.6)	50.5	(1.6)	13.9	(1.2)	6.6	(0.9)	27.3	(2.1)	47.9	(1.6)	16.2	(1.1)	8.6	(1.0)	**-1.9**	(0.9)
	OECD average	22.2	(0.3)	48.0	(0.3)	18.6	(0.2)	11.2	(0.2)	20.4	(0.3)	44.6	(0.3)	19.5	(0.2)	15.5	(0.2)	-4.4	(0.2)
Partners	Argentina	66.0	(3.0)	29.6	(2.7)	3.3	(0.7)	1.1	(0.6)	62.1	(2.6)	32.6	(2.3)	4.3	(0.7)	1.0	(0.3)	0.1	(0.6)
	Azerbaijan	10.2	(1.2)	82.7	(1.3)	6.2	(0.9)	0.9	(0.3)	10.9	(1.2)	81.3	(1.6)	7.0	(1.0)	0.9	(0.4)	0.0	(0.5)
	Brazil	75.7	(1.4)	21.3	(1.4)	2.3	(0.5)	0.7	(0.3)	68.9	(1.4)	26.3	(1.3)	3.4	(0.5)	1.4	(0.5)	-0.7	(0.4)
	Bulgaria	51.5	(2.8)	39.7	(2.1)	6.4	(1.0)	2.4	(0.7)	54.9	(2.7)	34.4	(2.1)	7.0	(0.9)	3.7	(1.0)	**-1.3**	(0.6)
	Chile	61.8	(2.4)	33.8	(2.0)	3.9	(0.6)	0.5	(0.2)	49.5	(2.7)	41.1	(2.2)	7.1	(1.0)	2.3	(0.7)	**-1.7**	(0.8)
	Colombia	76.5	(2.1)	21.9	(1.9)	1.3	(0.6)	0.3	(0.2)	66.5	(2.1)	30.3	(2.0)	2.7	(0.5)	0.6	(0.3)	-0.3	(0.2)
	Croatia	30.4	(1.7)	54.6	(1.7)	11.9	(0.9)	3.0	(0.5)	26.7	(1.5)	51.6	(1.3)	15.2	(1.0)	6.4	(0.7)	**-3.4**	(0.7)
	Estonia	11.3	(1.2)	54.0	(1.9)	23.6	(1.5)	11.1	(1.0)	12.8	(1.4)	50.3	(1.7)	22.9	(1.6)	13.9	(1.1)	**-2.9**	(1.2)
	Hong Kong-China	10.3	(1.0)	39.8	(1.8)	25.4	(1.2)	24.6	(1.8)	8.8	(1.3)	34.4	(1.7)	25.9	(1.5)	30.9	(1.6)	**-6.4**	(2.5)
	Indonesia	70.4	(2.2)	27.3	(1.9)	2.1	(0.6)	0.2	(0.1)	61.4	(4.6)	34.5	(3.7)	3.5	(1.1)	0.6	(0.3)	-0.4	(0.3)
	Israel	43.8	(2.0)	41.7	(1.7)	10.3	(0.8)	4.2	(0.6)	40.2	(2.4)	38.6	(1.8)	13.3	(1.2)	7.9	(0.8)	**-3.7**	(0.9)
	Jordan	66.4	(2.0)	31.7	(1.8)	1.7	(0.4)	0.1	(0.1)	66.3	(2.5)	30.8	(2.0)	2.6	(0.7)	0.3	(0.2)	-0.2	(0.3)
	Kyrgyzstan	90.3	(1.0)	9.1	(0.9)	0.6	(0.2)	0.1	(0.0)	88.4	(1.1)	10.6	(1.0)	0.9	(0.3)	0.1	(0.1)	0.0	(0.1)
	Latvia	21.3	(1.5)	56.1	(1.4)	16.9	(1.2)	5.6	(0.7)	20.0	(1.3)	54.5	(1.5)	17.8	(1.2)	7.6	(0.9)	-2.1	(1.1)
	Liechtenstein	14.6	(2.8)	41.7	(4.0)	24.6	(3.4)	19.2	(2.9)	11.5	(3.4)	48.0	(5.1)	22.8	(4.7)	17.7	(3.1)	1.5	(4.5)
	Lithuania	23.0	(1.3)	50.6	(1.3)	18.1	(1.1)	8.3	(1.0)	22.9	(1.4)	49.7	(1.5)	17.6	(1.0)	9.8	(1.0)	-1.5	(1.0)
	Macao-China	11.0	(1.0)	50.3	(1.8)	24.5	(1.2)	14.2	(0.9)	10.9	(1.0)	44.2	(1.3)	24.3	(1.3)	20.6	(1.1)	**-6.4**	(1.5)
	Montenegro	62.9	(1.3)	33.1	(1.5)	3.3	(0.6)	0.7	(0.3)	57.4	(1.4)	37.1	(1.4)	4.6	(0.5)	0.9	(0.3)	-0.2	(0.5)
	Qatar	87.5	(0.8)	11.1	(0.8)	1.1	(0.2)	0.3	(0.1)	86.9	(0.6)	10.5	(0.7)	1.6	(0.3)	0.9	(0.2)	**-0.6**	(0.2)
	Romania	54.5	(2.8)	40.4	(2.5)	4.5	(1.0)	0.7	(0.3)	51.0	(2.2)	40.9	(2.2)	6.3	(0.9)	1.8	(0.5)	**-1.1**	(0.5)
	Russian Federation	26.9	(1.8)	52.8	(1.6)	14.0	(1.2)	6.3	(0.9)	26.3	(1.9)	49.5	(1.6)	15.6	(1.3)	8.6	(0.9)	**-2.3**	(0.8)
	Serbia	42.4	(2.2)	46.9	(1.9)	8.7	(0.9)	2.0	(0.5)	42.8	(1.9)	44.1	(1.4)	9.5	(0.8)	3.7	(0.6)	**-1.7**	(0.7)
	Slovenia	18.2	(1.2)	49.7	(1.5)	19.5	(1.0)	12.5	(0.8)	17.1	(0.9)	49.3	(1.3)	18.8	(1.3)	14.8	(1.0)	-2.3	(1.3)
	Chinese Taipei	12.6	(1.5)	36.2	(1.8)	22.5	(1.4)	28.8	(2.1)	11.5	(1.2)	31.6	(1.6)	22.3	(1.0)	34.7	(1.7)	**-5.9**	(2.6)
	Thailand	51.3	(1.5)	42.2	(1.4)	5.3	(0.5)	1.1	(0.3)	55.3	(2.0)	37.9	(1.9)	5.3	(0.7)	1.6	(0.4)	-0.5	(0.5)
	Tunisia	75.2	(2.1)	22.7	(1.9)	1.8	(0.6)	0.3	(0.2)	69.5	(1.9)	26.7	(1.6)	3.1	(0.7)	0.7	(0.4)	-0.4	(0.4)
	Uruguay	48.0	(1.5)	42.6	(1.6)	7.2	(0.7)	2.1	(0.5)	44.1	(1.7)	42.5	(1.8)	9.1	(1.0)	4.3	(0.6)	**-2.1**	(0.6)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/2]

Table A2.3 Percentage of students by performance group, according to the immigrant status

		Native students (born in the country of assessment with at least one of their parents born in the same country)		Second-generation students (born in the country of assessment but whose parents were born in another country)		First-generation students (born in another country and whose parents were born in another country)		Students with an immigrant background (first- and second-generation)							
								Lowest performers		Moderate performers		Strong performers		Top performers	
		% of students	S.E.	% of students	S.E.	% of students	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	78.1	(1.2)	12.8	(0.7)	9.0	(0.6)	14.0	(1.1)	46.2	(1.6)	23.8	(1.3)	16.0	(1.8)
	Austria	86.8	(1.2)	5.3	(0.7)	7.9	(0.7)	43.6	(5.0)	43.1	(4.0)	10.4	(1.7)	2.9	(0.8)
	Belgium	86.7	(1.0)	7.0	(0.7)	6.3	(0.7)	40.5	(3.3)	49.1	(3.0)	8.3	(1.2)	2.1	(0.5)
	Canada	78.9	(1.2)	11.2	(0.7)	9.9	(0.7)	13.6	(1.2)	47.2	(1.5)	26.2	(1.6)	13.1	(1.3)
	Czech Republic	98.1	(0.2)	0.7	(0.1)	1.2	(0.2)	c	c	c	c	c	c	c	c
	Denmark	92.4	(0.8)	4.2	(0.6)	3.4	(0.4)	49.7	(4.0)	43.4	(3.7)	5.4	(1.6)	1.5	(0.8)
	Finland	98.5	(0.3)	0.2	c	1.3	(0.3)	c	c	c	c	c	c	c	c
	France	87.0	(1.0)	9.6	(0.9)	3.4	(0.3)	36.0	(3.3)	47.6	(3.1)	12.6	(2.3)	3.8	(1.6)
	Germany	85.8	(1.0)	7.7	(0.7)	6.6	(0.5)	37.6	(3.4)	47.9	(2.6)	11.3	(1.8)	3.1	(0.9)
	Greece	92.4	(0.7)	1.2	(0.2)	6.4	(0.7)	39.6	(4.9)	51.1	(4.8)	7.3	(2.6)	1.9	(1.1)
	Hungary	98.3	(0.3)	0.4	c	1.3	(0.2)	c	c	c	c	c	c	c	c
	Iceland	98.2	(0.2)	0.4	c	1.4	(0.2)	c	c	c	c	c	c	c	c
	Ireland	94.4	(0.5)	1.1	(0.1)	4.5	(0.5)	21.8	(4.1)	45.4	(4.4)	20.8	(3.5)	12.0	(2.8)
	Italy	96.2	(0.3)	0.7	(0.1)	3.1	(0.3)	47.0	(3.6)	44.8	(3.3)	6.7	(1.9)	1.4	(0.8)
	Japan	99.6	(0.1)	0.1	c	0.3	c	c	c	c	c	c	c	c	c
	Korea	100.0	(0.0)	0.0	c	a	a	c	c	c	c	c	c	c	c
	Luxembourg	63.9	(0.6)	19.5	(0.5)	16.6	(0.5)	38.4	(1.5)	47.9	(1.5)	10.5	(0.8)	3.2	(0.4)
	Mexico	97.6	(0.3)	0.6	(0.1)	1.9	(0.3)	c	c	c	c	c	c	c	c
	Netherlands	88.7	(1.1)	7.8	(0.8)	3.5	(0.4)	32.2	(5.0)	52.6	(4.0)	11.3	(2.2)	3.9	(1.2)
	New Zealand	78.7	(1.0)	6.9	(0.6)	14.3	(0.7)	18.8	(1.9)	40.1	(1.7)	22.5	(1.7)	18.5	(1.4)
	Norway	93.9	(0.7)	3.0	(0.5)	3.1	(0.3)	43.6	(3.8)	44.3	(3.3)	8.1	(2.8)	4.0	(1.6)
	Poland	99.8	(0.1)	0.1	c	0.1	c	c	c	c	c	c	c	c	c
	Portugal	94.1	(0.8)	2.4	(0.4)	3.5	(0.6)	49.7	(5.1)	41.8	(4.4)	7.2	(2.4)	1.3	(0.9)
	Slovak Republic	99.5	(0.1)	0.3	c	0.1	c	c	c	c	c	c	c	c	c
	Spain	93.1	(0.7)	0.8	(0.1)	6.1	(0.7)	40.2	(3.2)	47.9	(3.2)	10.2	(2.1)	1.6	(0.8)
	Sweden	89.2	(0.9)	6.2	(0.6)	4.7	(0.6)	35.0	(2.9)	51.7	(3.1)	9.7	(1.5)	3.5	(1.2)
	Switzerland	77.6	(0.7)	11.8	(0.5)	10.6	(0.4)	37.2	(2.0)	47.1	(1.8)	11.5	(1.2)	4.2	(0.8)
	Turkey	98.5	(0.4)	0.8	(0.3)	0.6	c	c	c	c	c	c	c	c	c
	United Kingdom	91.4	(0.9)	5.0	(0.6)	3.7	(0.5)	24.3	(3.9)	48.6	(3.7)	17.3	(2.3)	9.8	(1.8)
	United States	84.8	(1.2)	9.4	(0.9)	5.8	(0.5)	36.5	(2.8)	49.3	(2.5)	10.1	(1.6)	4.2	(0.9)
	OECD average	90.7	(0.1)	4.6	(0.1)	4.8	(0.1)	35.0	(0.8)	46.9	(0.7)	12.6	(0.4)	5.6	(0.3)
Partners	Argentina	97.3	(0.3)	1.6	(0.2)	1.1	(0.2)	c	c	c	c	c	c	c	c
	Azerbaijan	97.6	(0.5)	1.4	(0.4)	1.1	(0.1)	c	c	c	c	c	c	c	c
	Brazil	97.6	(0.2)	2.2	(0.2)	0.2	c	c	c	c	c	c	c	c	c
	Bulgaria	99.8	(0.1)	0.1	c	0.1	c	c	c	c	c	c	c	c	c
	Chile	99.4	(0.1)	0.2	c	0.4	c	c	c	c	c	c	c	c	c
	Colombia	99.6	(0.1)	0.2	c	0.1	c	c	c	c	c	c	c	c	c
	Croatia	88.0	(0.7)	4.8	(0.4)	7.2	(0.6)	20.4	(2.0)	63.4	(2.4)	13.7	(1.8)	2.5	(0.8)
	Estonia	88.4	(0.6)	10.5	(0.6)	1.1	(0.2)	12.0	(2.2)	62.9	(3.0)	17.8	(2.0)	7.3	(1.4)
	Hong Kong-China	56.2	(1.4)	24.6	(0.8)	19.2	(1.1)	9.3	(1.2)	47.2	(1.6)	28.8	(1.5)	14.7	(1.2)
	Indonesia	99.8	(0.1)	0.0	c	0.1	c	c	c	c	c	c	c	c	c
	Israel	77.0	(1.2)	11.5	(0.6)	11.5	(1.1)	34.9	(2.7)	45.2	(2.4)	14.2	(1.4)	5.6	(1.0)
	Jordan	83.2	(0.9)	10.4	(0.7)	6.4	(0.4)	31.7	(2.4)	60.2	(2.1)	7.5	(1.4)	0.7	(0.3)
	Kyrgyzstan	97.4	(0.4)	1.7	(0.3)	0.9	(0.2)	c	c	c	c	c	c	c	c
	Latvia	92.9	(0.6)	6.6	(0.6)	0.5	c	18.4	(2.5)	60.6	(3.5)	16.4	(2.8)	4.6	(1.6)
	Liechtenstein	63.2	(2.7)	13.1	(1.8)	23.6	(2.4)	24.5	(4.2)	47.2	(5.2)	16.1	(4.0)	12.2	(2.5)
	Lithuania	97.9	(0.4)	1.7	(0.3)	0.4	c	c	c	c	c	c	c	c	c
	Macao-China	26.4	(0.6)	57.8	(0.7)	15.8	(0.5)	8.8	(0.6)	61.9	(1.2)	23.9	(1.0)	5.4	(0.4)
	Montenegro	92.8	(0.5)	1.8	(0.2)	5.4	(0.4)	42.2	(3.5)	51.1	(3.8)	6.7	(2.3)	0.6	(0.6)
	Qatar	59.5	(0.5)	22.0	(0.6)	18.5	(0.5)	63.9	(1.1)	31.2	(1.1)	4.1	(0.4)	0.9	(0.2)
	Romania	99.9	(0.0)	a	a	0.1	c	c	c	c	c	c	c	c	c
	Russian Federation	91.3	(0.5)	4.0	(0.3)	4.8	(0.5)	25.9	(2.7)	58.6	(3.5)	13.2	(2.7)	2.4	(1.1)
	Serbia	91.0	(0.5)	3.2	(0.3)	5.9	(0.4)	33.0	(3.0)	60.5	(3.3)	5.8	(1.5)	0.6	(0.4)
	Slovenia	89.7	(0.5)	8.5	(0.4)	1.8	(0.2)	26.9	(2.4)	56.2	(2.6)	13.4	(2.3)	3.5	(1.1)
	Chinese Taipei	99.4	(0.1)	0.4	(0.1)	0.2	c	c	c	c	c	c	c	c	c
	Thailand	99.7	(0.1)	0.3	c	0.0	c	c	c	c	c	c	c	c	c
	Tunisia	99.2	(0.1)	0.5	c	0.3	c	c	c	c	c	c	c	c	c
	Uruguay	99.6	(0.1)	0.1	c	0.3	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 2/2]

Table A2.3 Percentage of students by performance group, according to the immigrant status

		Native students								Difference in the percentages of top performers between native students and students with an immigrant background (first- and second-generation)		If students' ESCS were equal to the national average ESCS		
		Lowest performers		Moderate performers		Strong performers		Top performers				Difference in the percentages of top performers between native students and students with an immigrant background (first- and second-generation)	Increase in the logit of being top performers associated with students being native	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.	Dif.	Logisitc regression coefficient	S.E.
OECD	Australia	11.8	(0.6)	48.5	(0.6)	25.1	(0.6)	14.6	(0.6)	-1.4	(1.7)	-1.3	-0.11	(0.13)
	Austria	11.9	(1.0)	51.1	(1.5)	25.8	(1.2)	11.1	(0.8)	**8.3**	(1.0)	**6.5**	**1.14**	(0.26)
	Belgium	12.9	(0.9)	48.5	(1.0)	27.2	(0.9)	11.4	(0.6)	**9.3**	(0.7)	**6.8**	**1.41**	(0.25)
	Canada	8.1	(0.5)	47.8	(0.8)	28.7	(0.8)	15.4	(0.6)	2.3	(1.4)	2.0	0.18	(0.12)
	Czech Republic	14.9	(1.2)	51.3	(1.2)	22.0	(0.9)	11.8	(1.0)	c	c	c	c	c
	Denmark	15.6	(1.0)	56.4	(0.9)	20.8	(1.0)	7.3	(0.7)	**5.7**	(1.0)	3.4	1.01	(0.63)
	Finland	3.5	(0.4)	42.4	(1.1)	32.7	(0.9)	21.3	(0.8)	c	c	c	c	c
	France	18.0	(1.4)	50.6	(1.6)	22.5	(1.1)	8.9	(0.7)	**5.0**	(1.6)	2.4	0.54	(0.45)
	Germany	10.3	(1.0)	49.3	(1.2)	26.5	(1.0)	13.9	(0.8)	**10.8**	(1.1)	**7.2**	**1.13**	(0.32)
	Greece	22.3	(1.3)	59.2	(1.2)	14.9	(0.9)	3.6	(0.4)	1.7	(1.2)	0.5	0.24	(0.66)
	Hungary	14.8	(1.0)	57.1	(1.2)	21.1	(0.9)	7.0	(0.6)	c	c	c	c	c
	Iceland	19.1	(0.8)	54.9	(0.8)	19.5	(0.8)	6.5	(0.5)	c	c	c	c	c
	Ireland	14.6	(1.0)	54.2	(1.0)	21.8	(0.9)	9.5	(0.7)	-2.6	(2.8)	-1.3	-0.17	(0.27)
	Italy	23.7	(0.8)	55.7	(0.8)	15.7	(0.6)	4.8	(0.4)	**3.4**	(0.8)	2.3	0.94	(0.62)
	Japan	11.9	(1.0)	46.0	(1.1)	27.0	(1.1)	15.1	(0.8)	c	c	c	c	c
	Korea	10.8	(1.1)	53.1	(1.5)	25.7	(0.9)	10.4	(1.1)	c	c	c	c	c
	Luxembourg	12.2	(0.8)	57.7	(1.5)	22.6	(1.0)	7.5	(0.5)	**4.4**	(0.6)	**1.6**	**0.40**	(0.16)
	Mexico	48.4	(1.3)	47.9	(1.2)	3.4	(0.4)	0.3	(0.1)	c	c	c	c	c
	Netherlands	10.2	(0.8)	47.3	(1.1)	28.0	(1.0)	14.5	(0.9)	**10.6**	(1.3)	**6.6**	**0.91**	(0.30)
	New Zealand	11.5	(0.7)	46.1	(0.9)	24.6	(0.8)	17.8	(0.8)	-0.7	(1.5)	0.1	0.01	(0.10)
	Norway	18.4	(1.1)	57.1	(1.1)	18.1	(0.7)	6.4	(0.5)	2.4	(1.6)	0.8	0.17	(0.41)
	Poland	16.4	(0.8)	57.1	(0.9)	19.6	(0.8)	6.9	(0.5)	c	c	c	c	c
	Portugal	22.4	(1.3)	59.0	(1.3)	15.3	(0.9)	3.3	(0.4)	**2.0**	(0.9)	1.3	0.99	(0.75)
	Slovak Republic	19.8	(0.9)	56.2	(1.2)	18.1	(1.0)	5.8	(0.5)	c	c	c	c	c
	Spain	17.7	(0.9)	58.4	(0.8)	18.7	(0.7)	5.2	(0.4)	**3.6**	(1.0)	2.5	1.06	(0.57)
	Sweden	13.2	(0.8)	55.4	(1.0)	22.8	(1.0)	8.5	(0.6)	**5.0**	(1.2)	3.4	0.67	(0.36)
	Switzerland	9.5	(0.6)	50.9	(1.3)	27.2	(1.1)	12.4	(0.9)	**8.2**	(0.9)	**5.5**	**0.91**	(0.18)
	Turkey	46.0	(1.6)	46.9	(1.5)	6.3	(1.2)	0.9	(0.3)	c	c	c	c	c
	United Kingdom	15.4	(0.6)	47.6	(0.9)	22.6	(0.6)	14.4	(0.6)	**4.6**	(1.8)	2.6	0.27	(0.20)
	United States	21.1	(1.6)	48.4	(1.3)	20.2	(1.0)	10.3	(0.8)	**6.1**	(1.0)	**2.9**	**0.53**	(0.20)
	OECD average	15.0	(0.2)	52.5	(0.3)	22.5	(0.2)	10.0	(0.1)	**4.4**	**(0.3)**	**2.8**	**0.61**	(0.09)
Partners	Argentina	55.6	(2.5)	39.7	(2.1)	4.2	(0.7)	0.5	(0.1)	c	c	c	c	c
	Azerbaijan	71.5	(1.9)	28.0	(1.9)	0.4	(0.2)	0.0	(0.0)	c	c	c	c	c
	Brazil	59.9	(1.4)	36.0	(1.3)	3.5	(0.4)	0.6	(0.2)	c	c	c	c	c
	Bulgaria	42.0	(2.4)	44.4	(1.7)	10.5	(1.1)	3.1	(0.6)	c	c	c	c	c
	Chile	39.1	(2.1)	50.3	(1.6)	8.6	(1.0)	2.0	(0.3)	c	c	c	c	c
	Colombia	59.2	(1.8)	38.7	(1.8)	2.0	(0.4)	0.2	(0.1)	c	c	c	c	c
	Croatia	16.1	(1.0)	60.0	(1.1)	18.4	(0.9)	5.5	(0.5)	**3.0**	(0.9)	1.5	0.50	(0.33)
	Estonia	6.6	(0.6)	53.4	(1.2)	27.7	(1.1)	12.3	(0.8)	**5.1**	(1.5)	**4.2**	**0.56**	(0.22)
	Hong Kong-China	8.1	(0.8)	44.3	(1.6)	30.5	(1.4)	17.1	(1.2)	2.4	(1.5)	-1.8	-0.14	(0.12)
	Indonesia	61.1	(3.4)	37.5	(2.9)	1.4	(0.5)	0.0	(0.0)	c	c	c	c	c
	Israel	33.2	(1.5)	46.5	(1.3)	14.6	(0.9)	5.7	(0.7)	0.1	(1.1)	-1.0	-0.23	(0.21)
	Jordan	45.0	(1.4)	49.0	(1.2)	5.4	(0.7)	0.6	(0.2)	0.0	(0.4)	0.1	0.23	(0.61)
	Kyrgyzstan	86.4	(0.9)	12.9	(0.9)	0.7	(0.2)	0.0	(0.0)	c	c	c	c	c
	Latvia	16.5	(1.2)	62.4	(1.2)	17.0	(1.0)	4.2	(0.4)	-0.5	(1.6)	-0.1	-0.04	(0.39)
	Liechtenstein	5.9	(2.4)	51.0	(3.9)	30.6	(3.3)	12.5	(2.3)	0.3	(3.3)	-0.6	-0.07	(0.33)
	Lithuania	19.7	(1.0)	57.5	(1.2)	17.7	(0.9)	5.0	(0.7)	c	c	c	c	c
	Macao-China	12.9	(1.1)	61.1	(1.8)	20.7	(1.5)	5.3	(0.8)	-0.1	(0.9)	-1.2	-0.26	(0.20)
	Montenegro	50.5	(1.0)	45.8	(1.1)	3.5	(0.4)	0.3	(0.1)	0.2	(0.4)	0.2	11.71	(7.53)
	Qatar	87.5	(0.6)	12.3	(0.6)	0.2	(0.1)	0.0	(0.0)	**-0.8**	(0.2)	m	m	m
	Romania	46.9	(2.4)	48.4	(2.3)	4.2	(0.8)	0.5	(0.1)	c	c	c	c	c
	Russian Federation	21.5	(1.5)	58.8	(1.1)	15.3	(1.1)	4.4	(0.5)	2.0	(1.2)	1.6	0.64	(0.52)
	Serbia	38.6	(1.6)	53.9	(1.4)	6.7	(0.6)	0.8	(0.2)	0.2	(0.4)	0.2	0.30	(0.87)
	Slovenia	12.1	(0.6)	50.1	(1.1)	23.7	(1.2)	14.1	(0.7)	**10.6**	(1.3)	**6.7**	**1.01**	(0.35)
	Chinese Taipei	11.0	(1.0)	45.8	(1.2)	28.3	(1.0)	14.9	(0.9)	c	c	c	c	c
	Thailand	45.5	(1.2)	50.1	(1.1)	4.1	(0.4)	0.4	(0.1)	c	c	c	c	c
	Tunisia	62.1	(1.4)	35.8	(1.2)	2.0	(0.5)	0.1	(0.1)	c	c	c	c	c
	Uruguay	41.2	(1.4)	50.2	(1.3)	7.1	(0.6)	1.5	(0.2)	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/2]

Table A2.4 Percentage of students by performance group, according to the language spoken at home

		Language spoken at home most of the time is DIFFERENT from the language of assessment, from other official languages or from other national dialects		Language spoken at home most of the time is the SAME as the language of assessment, other official languages or another national dialects		Language spoken at home most of the time is DIFFERENT from the language of assessment, from other official languages or from other national dialects							
						Lowest performers		Moderate performers		Strong performers		Top performers	
		% of students	S.E.	% of students	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	8.0	(0.7)	92.0	(0.7)	18.6	(2.0)	45.8	(2.7)	21.9	(2.5)	13.7	(2.5)
	Austria	10.0	(1.1)	90.0	(1.1)	44.4	(6.3)	43.6	(5.1)	9.8	(2.3)	2.2	(0.7)
	Belgium	5.7	(0.5)	94.3	(0.5)	46.0	(3.9)	44.3	(3.7)	7.6	(1.6)	2.1	(0.9)
	Canada	10.6	(0.7)	89.4	(0.7)	14.9	(1.7)	48.7	(2.5)	24.0	(2.3)	12.4	(1.7)
	Czech Republic	0.8	(0.2)	99.2	(0.2)	c	c	c	c	c	c	c	c
	Denmark	4.5	(0.5)	95.5	(0.5)	48.0	(5.1)	46.5	(4.7)	4.2	(1.8)	1.3	(1.1)
	Finland	1.3	(0.2)	98.7	(0.2)	c	c	c	c	c	c	c	c
	France	5.4	(0.5)	94.6	(0.5)	34.8	(4.1)	47.0	(3.9)	13.5	(2.6)	4.8	(1.7)
	Germany	9.0	(0.7)	91.0	(0.7)	37.4	(4.1)	51.3	(3.5)	9.7	(2.1)	1.5	(0.8)
	Greece	3.9	(0.5)	96.1	(0.5)	54.0	(6.1)	41.3	(6.2)	4.5	(2.5)	0.7	(0.6)
	Hungary	0.8	(0.2)	99.2	(0.2)	c	c	c	c	c	c	c	c
	Iceland	2.2	(0.3)	97.8	(0.3)	c	c	c	c	c	c	c	c
	Ireland	2.0	(0.3)	98.0	(0.3)	c	c	c	c	c	c	c	c
	Italy	2.9	(0.3)	97.1	(0.3)	c	c	c	c	c	c	c	c
	Japan	0.3	c	99.7	(0.1)	c	c	c	c	c	c	c	c
	Korea	0.1	c	99.9	(0.0)	c	c	c	c	c	c	c	c
	Luxembourg	23.7	(0.6)	76.3	(0.6)	43.3	(2.1)	47.8	(2.1)	7.4	(0.9)	1.5	(0.5)
	Mexico	0.2	(0.1)	99.8	(0.1)	c	c	c	c	c	c	c	c
	Netherlands	5.9	(0.7)	94.1	(0.7)	39.9	(6.0)	45.2	(5.2)	11.6	(3.2)	3.4	(1.4)
	New Zealand	8.7	(0.6)	91.3	(0.6)	26.3	(3.1)	39.0	(3.2)	19.6	(2.3)	15.1	(2.0)
	Norway	4.7	(0.5)	95.3	(0.5)	39.9	(4.4)	46.4	(4.0)	10.0	(2.3)	3.8	(1.6)
	Poland	0.4	c	99.6	(0.2)	c	c	c	c	c	c	c	c
	Portugal	2.3	(0.4)	97.7	(0.4)	c	c	c	c	c	c	c	c
	Slovak Republic	0.4	c	99.6	(0.1)	c	c	c	c	c	c	c	c
	Spain	2.6	(0.3)	97.4	(0.3)	c	c	c	c	c	c	c	c
	Sweden	7.8	(0.7)	92.2	(0.7)	38.3	(3.4)	49.3	(4.3)	9.5	(2.5)	2.9	(1.1)
	Switzerland	12.9	(0.6)	87.1	(0.6)	41.4	(2.5)	46.1	(2.7)	9.5	(1.5)	3.1	(0.9)
	Turkey	2.4	(0.4)	97.6	(0.4)	c	c	c	c	c	c	c	c
	United Kingdom	3.8	(0.6)	96.2	(0.6)	31.4	(6.3)	46.2	(5.1)	15.2	(2.8)	7.1	(2.0)
	United States	10.7	(1.0)	89.3	(1.0)	42.9	(3.0)	47.6	(2.7)	6.7	(1.3)	2.8	(0.9)
	OECD average	5.1	(0.1)	94.9	(0.1)	37.6	(1.1)	46.0	(1.0)	11.5	(0.6)	4.9	(0.3)
Partners	Argentina	0.5	c	99.5	(0.2)	c	c	c	c	c	c	c	c
	Azerbaijan	2.2	(0.7)	97.8	(0.7)	c	c	c	c	c	c	c	c
	Brazil	0.3	(0.1)	99.7	(0.1)	c	c	c	c	c	c	c	c
	Bulgaria	4.7	(0.9)	95.3	(0.9)	80.9	(4.2)	18.1	(4.0)	0.9	(0.8)	0.3	(0.4)
	Chile	0.2	c	99.8	(0.1)	c	c	c	c	c	c	c	c
	Colombia	0.5	c	99.5	(0.2)	c	c	c	c	c	c	c	c
	Croatia	0.4	c	99.6	(0.1)	c	c	c	c	c	c	c	c
	Estonia	0.5	c	99.5	(0.1)	c	c	c	c	c	c	c	c
	Hong Kong-China	2.7	(0.7)	97.3	(0.7)	c	c	c	c	c	c	c	c
	Indonesia	1.5	(0.3)	98.5	(0.3)	c	c	c	c	c	c	c	c
	Israel	11.4	(1.1)	88.6	(1.1)	35.3	(3.6)	43.2	(3.1)	15.3	(2.4)	6.2	(1.5)
	Jordan	2.9	(0.3)	97.1	(0.3)	c	c	c	c	c	c	c	c
	Kyrgyzstan	1.2	(0.3)	98.8	(0.3)	c	c	c	c	c	c	c	c
	Latvia	0.5	c	99.5	(0.1)	c	c	c	c	c	c	c	c
	Liechtenstein	12.2	(1.6)	87.8	(1.6)	44.9	(10.6)	41.4	(9.9)	10.2	(5.4)	3.6	(3.4)
	Lithuania	0.1	c	99.9	(0.0)	c	c	c	c	c	c	c	c
	Macao-China	3.9	(0.3)	96.1	(0.3)	20.1	(4.6)	61.6	(5.2)	16.3	(3.9)	2.0	(1.4)
	Montenegro	2.4	(0.2)	97.6	(0.2)	c	c	c	c	c	c	c	c
	Qatar	4.1	(0.2)	95.9	(0.2)	59.9	(3.0)	26.9	(3.0)	10.1	(2.1)	3.1	(1.2)
	Romania	0.6	c	99.4	(0.2)	c	c	c	c	c	c	c	c
	Russian Federation	9.5	(2.0)	90.5	(2.0)	39.9	(4.6)	55.1	(4.9)	4.8	(1.8)	0.4	(0.5)
	Serbia	0.5	c	99.5	(0.1)	c	c	c	c	c	c	c	c
	Slovenia	5.6	(0.4)	94.4	(0.4)	34.8	(3.7)	53.3	(3.4)	9.7	(2.9)	2.2	(1.1)
	Chinese Taipei	0.6	(0.1)	99.4	(0.1)	c	c	c	c	c	c	c	c
	Thailand	1.6	(0.2)	98.4	(0.2)	c	c	c	c	c	c	c	c
	Tunisia	4.7	(0.5)	95.3	(0.5)	60.6	(4.4)	36.1	(3.9)	3.1	(1.9)	0.6	(0.6)
	Uruguay	1.4	(0.3)	98.6	(0.3)	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 2/2]

Table A2.4 Percentage of students by performance group, according to the language spoken at home

		Language spoken at home most of the time is the SAME as the language of assessment, other official languages or another national dialect										If students' ESCS were equal to the national average ESCS		
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the percentages of top performers between students who do not speak the language of assessment at home and students who speak the language of assessment at home		Difference in the percentages of top performers between students who do not speak the language of assessment at home and students who speak the language of assessment at home	Increase in the logit of being top performers associated with students speaking the language of assessment at home	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.	Dif.	Logisitc regression coefficient	S.E.
OECD	Australia	11.7	(0.5)	48.2	(0.6)	25.1	(0.6)	15.0	(0.7)	1.2	(2.3)	-0.5	-0.05	(0.20)
	Austria	12.1	(1.0)	51.1	(1.5)	25.7	(1.2)	11.1	(0.8)	**8.9**	(1.0)	**7.2**	**1.39**	(0.34)
	Belgium	13.4	(0.8)	48.4	(0.9)	26.9	(0.8)	11.4	(0.6)	**9.3**	(1.1)	**6.6**	**1.33**	(0.47)
	Canada	8.5	(0.5)	47.6	(0.7)	28.7	(0.7)	15.2	(0.6)	2.9	(1.8)	1.8	0.16	(0.17)
	Czech Republic	14.8	(1.2)	51.3	(1.2)	22.0	(0.9)	11.8	(1.0)	c	c	c	c	c
	Denmark	16.2	(1.0)	56.0	(0.9)	20.6	(1.0)	7.3	(0.7)	**6.0**	(1.2)	4.1	1.44	(1.10)
	Finland	3.7	(0.4)	42.5	(1.1)	32.5	(0.9)	21.3	(0.8)	c	c	c	c	c
	France	19.5	(1.4)	50.3	(1.5)	21.7	(1.1)	8.5	(0.7)	**3.7**	(1.8)	1.5	0.30	(0.42)
	Germany	10.6	(1.0)	48.9	(1.2)	26.5	(1.0)	14.0	(0.8)	**12.4**	(1.0)	**9.6**	**1.97**	(0.54)
	Greece	22.8	(1.3)	59.0	(1.2)	14.6	(0.9)	3.7	(0.4)	**3.5**	(0.6)	2.5	11.72	(6.41)
	Hungary	14.6	(0.9)	57.3	(1.2)	21.2	(0.9)	7.0	(0.7)	c	c	c	c	c
	Iceland	19.2	(0.8)	54.7	(0.9)	19.5	(0.8)	6.5	(0.5)	c	c	c	c	c
	Ireland	14.6	(1.0)	53.9	(0.9)	21.8	(0.9)	9.6	(0.7)	c	c	c	c	c
	Italy	21.4	(0.9)	56.5	(0.9)	16.9	(0.7)	5.2	(0.4)	c	c	c	c	c
	Japan	11.4	(1.0)	45.7	(1.1)	27.4	(1.1)	15.5	(0.8)	c	c	c	c	c
	Korea	11.2	(1.1)	52.8	(1.5)	25.6	(0.9)	10.4	(1.1)	c	c	c	c	c
	Luxembourg	11.7	(0.7)	57.0	(1.3)	23.4	(1.0)	8.0	(0.5)	**6.5**	(0.7)	**3.3**	0.97	(0.32)
	Mexico	50.8	(1.4)	45.8	(1.3)	3.2	(0.3)	0.3	(0.1)	c	c	c	c	c
	Netherlands	10.8	(0.7)	48.2	(1.2)	27.1	(1.0)	13.9	(0.9)	**10.6**	(1.4)	**7.1**	**1.07**	(0.42)
	New Zealand	11.1	(0.6)	45.3	(0.9)	25.1	(0.8)	18.5	(0.8)	3.5	(2.0)	1.7	0.14	(0.17)
	Norway	18.9	(1.1)	56.8	(1.1)	17.9	(0.7)	6.4	(0.5)	2.6	(1.6)	1.6	0.35	(0.47)
	Poland	16.9	(0.8)	56.9	(0.9)	19.4	(0.8)	6.8	(0.5)	c	c	c	c	c
	Portugal	23.3	(1.3)	58.0	(1.3)	15.3	(0.9)	3.3	(0.4)	c	c	c	c	c
	Slovak Republic	20.0	(0.9)	56.1	(1.2)	18.1	(1.0)	5.8	(0.5)	c	c	c	c	c
	Spain	18.4	(0.9)	58.3	(0.7)	18.3	(0.8)	5.0	(0.4)	c	c	c	c	c
	Sweden	13.3	(0.7)	55.7	(1.0)	22.5	(1.0)	8.5	(0.6)	**5.6**	(1.3)	**4.1**	**0.90**	(0.43)
	Switzerland	10.4	(0.6)	50.7	(1.2)	26.8	(1.1)	12.2	(0.9)	**9.1**	(1.0)	**6.0**	**1.05**	(0.27)
	Turkey	46.1	(1.7)	46.6	(1.5)	6.3	(1.2)	0.9	(0.3)	c	c	c	c	c
	United Kingdom	15.6	(0.6)	47.7	(0.8)	22.4	(0.6)	14.3	(0.6)	**7.2**	(2.1)	4.4	0.50	(0.31)
	United States	21.4	(1.6)	48.6	(1.3)	20.0	(1.1)	10.1	(0.8)	**7.3**	(1.0)	**3.7**	**0.75**	(0.34)
	OECD average	17.1	(0.2)	51.9	(0.2)	21.4	(0.2)	9.6	(0.1)	**6.3**	(0.4)	**4.0**	**1.50**	(0.42)
Partners	Argentina	55.8	(2.5)	39.6	(2.2)	4.2	(0.6)	0.5	(0.1)	c	c	c	c	c
	Azerbaijan	72.2	(1.9)	27.4	(1.8)	0.4	(0.2)	0.0	(0.0)	c	c	c	c	c
	Brazil	60.9	(1.4)	35.1	(1.3)	3.4	(0.4)	0.6	(0.2)	c	c	c	c	c
	Bulgaria	40.2	(2.3)	45.6	(1.6)	11.0	(1.2)	3.2	(0.6)	**3.1**	(0.7)	1.9	6.41	(7.54)
	Chile	39.7	(2.1)	50.0	(1.6)	8.4	(1.1)	1.9	(0.4)	c	c	c	c	c
	Colombia	60.1	(1.8)	37.8	(1.8)	1.9	(0.4)	0.2	(0.1)	c	c	c	c	c
	Croatia	16.8	(0.9)	60.3	(1.0)	17.8	(0.9)	5.1	(0.5)	c	c	c	c	c
	Estonia	7.4	(0.6)	54.5	(1.1)	26.4	(0.9)	11.6	(0.8)	c	c	c	c	c
	Hong Kong-China	7.7	(0.7)	45.5	(1.2)	30.4	(1.0)	16.4	(1.0)	c	c	c	c	c
	Indonesia	61.3	(3.4)	37.3	(2.9)	1.4	(0.6)	0.0	(0.0)	c	c	c	c	c
	Israel	33.6	(1.4)	46.5	(1.2)	14.4	(0.9)	5.5	(0.7)	-0.7	(1.7)	-1.9	-0.41	(0.31)
	Jordan	43.3	(1.2)	50.3	(1.0)	5.7	(0.7)	0.6	(0.2)	c	c	c	c	c
	Kyrgyzstan	86.2	(1.0)	13.1	(0.9)	0.7	(0.2)	0.0	(0.0)	c	c	c	c	c
	Latvia	16.9	(1.1)	62.1	(1.2)	16.8	(1.0)	4.1	(0.4)	c	c	c	c	c
	Liechtenstein	7.8	(1.9)	51.2	(3.8)	28.2	(2.9)	12.9	(2.0)	**9.3**	(3.8)	3.4	0.64	(1.12)
	Lithuania	19.9	(1.0)	57.4	(1.1)	17.6	(0.9)	5.1	(0.7)	c	c	c	c	c
	Macao-China	9.6	(0.5)	61.7	(0.8)	23.2	(0.8)	5.5	(0.4)	**3.5**	(1.5)	3.6	1.05	(0.81)
	Montenegro	49.6	(1.0)	46.5	(1.1)	3.6	(0.4)	0.3	(0.1)	c	c	c	c	c
	Qatar	79.2	(0.5)	19.2	(0.5)	1.3	(0.1)	0.2	(0.1)	-2.9	(1.2)	m	m	m
	Romania	46.8	(2.4)	48.5	(2.3)	4.3	(0.8)	0.5	(0.1)	c	c	c	c	c
	Russian Federation	20.3	(1.3)	59.0	(0.9)	16.2	(1.1)	4.6	(0.5)	**4.3**	(0.7)	0.2	7.29	(7.54)
	Serbia	38.4	(1.6)	54.3	(1.4)	6.6	(0.6)	0.8	(0.2)	c	c	c	c	c
	Slovenia	12.1	(0.6)	50.5	(1.1)	23.6	(1.2)	13.8	(0.6)	**11.6**	(1.3)	**0.5**	**1.39**	(0.53)
	Chinese Taipei	10.7	(0.9)	45.6	(1.2)	28.5	(1.0)	15.2	(0.9)	c	c	c	c	c
	Thailand	45.5	(1.2)	49.9	(1.1)	4.1	(0.4)	0.4	(0.1)	c	c	c	c	c
	Tunisia	63.0	(1.3)	34.9	(1.2)	1.9	(0.5)	0.1	(0.1)	-0.1	(0.5)	0.0	9.11	(9.58)
	Uruguay	41.0	(1.4)	50.4	(1.3)	7.1	(0.6)	1.5	(0.2)	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A2.5a Students' socio-economic background, by performance group

		PISA index of economic, social and cultural status (ESCS)									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	SE
OECD	Australia	-0.23	(0.03)	0.11	(0.01)	0.38	(0.02)	0.60	(0.02)	**-0.22**	(0.03)
	Austria	-0.38	(0.07)	0.16	(0.03)	0.49	(0.04)	0.61	(0.05)	**-0.12**	(0.06)
	Belgium	-0.47	(0.04)	0.09	(0.02)	0.54	(0.03)	0.75	(0.04)	**-0.21**	(0.04)
	Canada	-0.06	(0.04)	0.26	(0.02)	0.52	(0.02)	0.70	(0.02)	**-0.18**	(0.03)
	Czech Republic	-0.41	(0.04)	-0.06	(0.02)	0.26	(0.03)	0.57	(0.04)	**-0.32**	(0.04)
	Denmark	-0.20	(0.04)	0.27	(0.03)	0.65	(0.04)	0.94	(0.06)	**-0.29**	(0.07)
	Finland	-0.18	(0.07)	0.08	(0.02)	0.35	(0.03)	0.57	(0.03)	**-0.22**	(0.04)
	France	-0.65	(0.04)	-0.14	(0.03)	0.30	(0.04)	0.59	(0.06)	**-0.28**	(0.06)
	Germany	-0.38	(0.06)	0.18	(0.03)	0.62	(0.03)	0.90	(0.04)	**-0.28**	(0.05)
	Greece	-0.66	(0.04)	-0.11	(0.03)	0.33	(0.05)	0.64	(0.10)	**-0.31**	(0.11)
	Hungary	-0.76	(0.05)	-0.16	(0.03)	0.35	(0.04)	0.69	(0.06)	**-0.34**	(0.06)
	Iceland	0.46	(0.03)	0.74	(0.02)	1.03	(0.04)	1.20	(0.07)	**-0.17**	(0.09)
	Ireland	-0.48	(0.05)	-0.09	(0.03)	0.28	(0.04)	0.48	(0.05)	**-0.21**	(0.05)
	Italy	-0.46	(0.03)	-0.05	(0.02)	0.29	(0.03)	0.59	(0.06)	**-0.30**	(0.06)
	Japan	-0.35	(0.04)	-0.09	(0.02)	0.11	(0.03)	0.27	(0.03)	**-0.17**	(0.04)
	Korea	-0.38	(0.04)	-0.10	(0.02)	0.17	(0.03)	0.43	(0.07)	**-0.26**	(0.06)
	Luxembourg	-0.68	(0.04)	0.13	(0.02)	0.65	(0.03)	0.87	(0.06)	**-0.22**	(0.07)
	Mexico	-1.44	(0.05)	-0.59	(0.04)	0.30	(0.08)	c	c	c	c
	Netherlands	-0.36	(0.07)	0.12	(0.03)	0.53	(0.04)	0.80	(0.03)	**-0.26**	(0.05)
	New Zealand	-0.45	(0.05)	-0.03	(0.02)	0.29	(0.03)	0.58	(0.03)	**-0.29**	(0.04)
	Norway	0.12	(0.04)	0.41	(0.02)	0.66	(0.04)	0.82	(0.06)	**-0.16**	(0.08)
	Poland	-0.78	(0.03)	-0.36	(0.02)	0.03	(0.04)	0.40	(0.05)	**-0.37**	(0.06)
	Portugal	-1.28	(0.04)	-0.59	(0.04)	0.11	(0.07)	0.66	(0.11)	**-0.55**	(0.12)
	Slovak Republic	-0.71	(0.06)	-0.16	(0.03)	0.26	(0.04)	0.63	(0.06)	**-0.37**	(0.07)
	Spain	-0.84	(0.04)	-0.35	(0.03)	0.18	(0.05)	0.49	(0.08)	**-0.31**	(0.07)
	Sweden	-0.16	(0.04)	0.19	(0.02)	0.49	(0.03)	0.68	(0.05)	**-0.19**	(0.06)
	Switzerland	-0.45	(0.03)	-0.01	(0.02)	0.40	(0.03)	0.67	(0.04)	**-0.27**	(0.05)
	Turkey	-1.61	(0.04)	-1.13	(0.04)	-0.07	(0.13)	c	c	c	c
	United Kingdom	-0.25	(0.03)	0.08	(0.02)	0.44	(0.02)	0.68	(0.03)	**-0.25**	(0.03)
	United States	-0.36	(0.04)	0.10	(0.03)	0.55	(0.05)	0.80	(0.06)	**-0.25**	(0.06)
	OECD average	-0.42	(0.01)	0.02	(0.00)	0.40	(0.01)	0.66	(0.01)	**-0.26**	(0.01)
Partners	Argentina	-1.04	(0.05)	-0.19	(0.07)	0.46	(0.11)	c	c	c	c
	Azerbaijan	-0.57	(0.03)	-0.13	(0.07)	c	c	c	c	c	c
	Brazil	-1.46	(0.03)	-0.70	(0.04)	0.30	(0.12)	c	c	c	c
	Bulgaria	-0.70	(0.05)	0.02	(0.04)	0.49	(0.07)	0.75	(0.10)	**-0.26**	(0.11)
	Chile	-1.25	(0.05)	-0.50	(0.06)	0.37	(0.08)	c	c	c	c
	Colombia	-1.29	(0.05)	-0.62	(0.06)	c	c	c	c	c	c
	Croatia	-0.51	(0.03)	-0.16	(0.02)	0.24	(0.04)	0.63	(0.05)	**-0.39**	(0.07)
	Estonia	-0.24	(0.06)	0.01	(0.02)	0.32	(0.04)	0.60	(0.05)	**-0.28**	(0.06)
	Hong Kong-China	-1.07	(0.06)	-0.82	(0.03)	-0.53	(0.05)	-0.32	(0.06)	**-0.20**	(0.06)
	Indonesia	-1.75	(0.04)	-1.17	(0.08)	c	c	c	c	c	c
	Israel	-0.10	(0.03)	0.28	(0.03)	0.60	(0.04)	0.76	(0.05)	**-0.17**	(0.07)
	Jordan	-0.93	(0.04)	-0.35	(0.03)	0.20	(0.08)	c	c	c	c
	Kyrgyzstan	-0.75	(0.02)	-0.14	(0.06)	c	c	c	c	c	c
	Latvia	-0.44	(0.05)	-0.04	(0.02)	0.33	(0.04)	0.57	(0.08)	**-0.23**	(0.09)
	Liechtenstein	-0.66	(0.14)	0.11	(0.07)	0.50	(0.10)	0.74	(0.14)	-0.24	(0.17)
	Lithuania	-0.47	(0.03)	0.02	(0.03)	0.46	(0.05)	0.76	(0.07)	**-0.30**	(0.07)
	Macao-China	-1.08	(0.05)	-0.96	(0.02)	-0.77	(0.04)	-0.59	(0.08)	-0.18	(0.09)
	Montenegro	-0.22	(0.02)	0.15	(0.02)	0.61	(0.12)	c	c	c	c
	Qatar	0.14	(0.01)	0.45	(0.02)	c	c	c	c	c	c
	Romania	-0.69	(0.05)	-0.15	(0.05)	0.54	(0.09)	c	c	c	c
	Russian Federation	-0.40	(0.03)	-0.10	(0.03)	0.19	(0.04)	0.41	(0.07)	**-0.22**	(0.07)
	Serbia	-0.47	(0.03)	0.01	(0.03)	0.50	(0.07)	c	c	c	c
	Slovenia	-0.40	(0.03)	-0.01	(0.02)	0.41	(0.03)	0.73	(0.05)	**-0.31**	(0.07)
	Chinese Taipei	-0.75	(0.04)	-0.45	(0.03)	-0.14	(0.03)	0.14	(0.03)	**-0.28**	(0.04)
	Thailand	-1.79	(0.03)	-1.22	(0.04)	-0.14	(0.11)	c	c	c	c
	Tunisia	-1.49	(0.06)	-0.79	(0.10)	c	c	c	c	c	c
	Uruguay	-1.00	(0.04)	-0.28	(0.04)	0.45	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/1]

Table A2.5b Percentage of students with the PISA index of economic, social and cultural status (ESCS) lower than the national average ESCS, by performance group

		Percentage of students in each performance group with the PISA index of economic, social and cultural status (ESCS) lower than the national average ESCS									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.
OECD	Australia	71.2	(1.4)	54.7	(0.9)	39.4	(1.2)	28.3	(1.4)	**11.0**	(1.9)
	Austria	78.1	(2.3)	55.1	(1.5)	37.6	(2.1)	32.6	(3.3)	5.0	(3.7)
	Belgium	77.6	(1.7)	54.5	(1.2)	33.8	(1.5)	23.4	(1.8)	**10.4**	(2.2)
	Canada	69.1	(2.0)	55.0	(1.0)	40.7	(1.4)	30.5	(1.5)	**10.2**	(1.8)
	Czech Republic	73.2	(1.9)	56.7	(1.7)	38.6	(2.0)	23.0	(1.8)	**15.6**	(2.3)
	Denmark	69.7	(2.1)	52.3	(1.5)	33.6	(2.0)	23.0	(2.9)	**10.6**	(3.1)
	Finland	72.8	(3.7)	59.2	(1.4)	43.7	(1.6)	33.5	(2.0)	**10.2**	(2.4)
	France	76.6	(2.2)	53.5	(1.7)	30.2	(2.2)	18.6	(3.3)	**11.5**	(4.1)
	Germany	77.7	(2.2)	58.0	(1.6)	37.6	(2.1)	25.8	(2.4)	**11.8**	(3.7)
	Greece	71.8	(1.9)	50.1	(1.6)	32.3	(2.5)	18.2	(3.5)	**14.1**	(3.7)
	Hungary	80.4	(2.4)	57.1	(1.5)	34.6	(2.0)	20.3	(2.8)	**14.3**	(3.2)
	Iceland	62.8	(1.9)	50.6	(1.2)	35.3	(2.2)	25.6	(3.3)	**9.7**	(4.3)
	Ireland	73.4	(2.3)	56.4	(1.4)	38.3	(2.5)	27.7	(2.7)	**10.6**	(2.9)
	Italy	67.2	(1.4)	50.3	(1.2)	34.2	(1.9)	22.4	(2.7)	**11.9**	(3.4)
	Japan	71.7	(2.5)	56.0	(1.4)	44.3	(1.7)	33.7	(2.2)	**10.6**	(2.8)
	Korea	67.8	(2.5)	55.2	(1.3)	41.8	(2.0)	28.7	(3.4)	**13.1**	(3.3)
	Luxembourg	76.5	(1.6)	45.4	(1.0)	23.0	(2.1)	15.0	(3.0)	8.0	(4.2)
	Mexico	66.2	(1.8)	40.9	(1.4)	16.5	(3.1)	c	c	c	c
	Netherlands	76.7	(2.2)	56.3	(1.4)	35.1	(2.0)	24.2	(1.9)	**10.9**	(3.1)
	New Zealand	75.5	(2.5)	56.1	(1.5)	40.0	(1.8)	25.1	(1.8)	**14.9**	(2.5)
	Norway	66.3	(2.1)	52.5	(1.4)	37.4	(2.7)	26.6	(3.1)	**10.8**	(4.5)
	Poland	77.5	(1.7)	56.2	(1.3)	39.4	(2.5)	25.2	(3.0)	**14.3**	(4.5)
	Portugal	74.7	(1.8)	51.3	(1.6)	29.1	(2.2)	18.0	(3.9)	**11.1**	(4.7)
	Slovak Republic	79.3	(2.0)	58.2	(1.3)	39.4	(2.5)	23.3	(3.3)	**16.0**	(4.2)
	Spain	72.6	(1.8)	55.1	(1.2)	33.3	(2.0)	22.5	(2.6)	**10.8**	(2.4)
	Sweden	69.7	(2.3)	53.2	(1.3)	36.6	(2.0)	24.9	(3.2)	**11.8**	(4.3)
	Switzerland	74.4	(1.9)	54.8	(1.0)	35.3	(1.4)	23.5	(2.3)	**11.9**	(3.0)
	Turkey	66.5	(1.7)	48.5	(1.8)	17.0	(3.4)	c	c	c	c
	United Kingdom	73.0	(1.7)	56.6	(1.0)	36.9	(1.5)	24.9	(1.8)	**11.9**	(2.1)
	United States	71.8	(2.2)	49.9	(1.7)	29.4	(2.4)	19.2	(3.0)	**10.1**	(3.6)
	OECD average	73.2	(0.4)	54.3	(0.3)	36.1	(0.4)	24.6	(0.5)	**11.5**	(0.6)
Partners	Argentina	64.1	(2.2)	33.5	(2.6)	14.9	(3.4)	c	c	c	c
	Azerbaijan	57.6	(1.4)	41.8	(2.6)	c	c	c	c	c	c
	Brazil	61.0	(1.4)	36.1	(1.6)	9.0	(2.6)	c	c	c	c
	Bulgaria	74.1	(1.7)	44.5	(2.0)	24.1	(3.3)	15.8	(4.2)	8.3	(4.9)
	Chile	71.7	(1.9)	44.6	(2.2)	16.0	(2.5)	c	c	c	c
	Colombia	58.3	(2.2)	37.8	(2.4)	c	c	c	c	c	c
	Croatia	71.1	(1.9)	56.6	(1.1)	39.4	(2.0)	21.3	(3.2)	**18.1**	(4.2)
	Estonia	72.3	(3.5)	57.7	(1.2)	41.5	(2.0)	27.1	(3.0)	**14.4**	(3.6)
	Hong Kong-China	68.4	(2.6)	57.7	(1.8)	45.0	(2.2)	37.6	(3.1)	**7.4**	(3.3)
	Indonesia	62.0	(1.7)	40.0	(3.6)	c	c	c	c	c	c
	Israel	62.0	(1.8)	42.1	(1.7)	26.6	(2.7)	17.0	(3.1)	9.6	(4.7)
	Jordan	61.4	(1.3)	39.3	(1.5)	19.1	(3.2)	c	c	c	c
	Kyrgyzstan	55.0	(1.1)	27.2	(2.4)	c	c	c	c	c	c
	Latvia	68.0	(2.4)	52.6	(1.3)	35.4	(2.3)	23.1	(4.0)	**12.3**	(4.5)
	Liechtenstein	81.6	(7.2)	56.1	(4.0)	37.2	(5.8)	30.2	(7.8)	7.0	(9.6)
	Lithuania	72.2	(1.6)	51.8	(1.4)	33.0	(2.4)	17.8	(3.5)	**15.2**	(4.2)
	Macao-China	58.9	(2.7)	54.8	(1.1)	44.9	(2.1)	40.6	(4.4)	4.3	(5.3)
	Montenegro	59.1	(1.1)	42.4	(1.3)	23.8	(5.9)	c	c	c	c
	Qatar	46.1	(0.6)	28.7	(1.3)	c	c	c	c	c	c
	Romania	64.8	(2.1)	44.3	(2.2)	16.4	(4.9)	c	c	c	c
	Russian Federation	68.4	(1.9)	52.2	(1.4)	36.0	(2.6)	22.7	(4.0)	**13.4**	(4.4)
	Serbia	68.3	(1.6)	47.6	(1.5)	28.2	(3.4)	c	c	c	c
	Slovenia	76.9	(1.8)	60.5	(1.2)	38.4	(1.7)	24.4	(2.7)	**13.9**	(3.5)
	Chinese Taipei	73.0	(2.2)	57.4	(1.3)	40.4	(1.6)	28.5	(1.5)	**11.8**	(2.2)
	Thailand	70.7	(1.5)	50.0	(1.5)	16.3	(2.9)	c	c	c	c
	Tunisia	60.8	(2.0)	39.3	(3.1)	c	c	c	c	c	c
	Uruguay	65.6	(1.8)	40.1	(1.7)	16.6	(2.9)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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Table A2.5c Percentage of students with the PISA index of economic, social and cultural status (ESCS) lower than the OECD average ESCS, by performance group

		Percentage of students in each performance group with the PISA index of economic, social and cultural status (ESCS) lower than the OECD average ESCS									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the percentages between strong performers and top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Dif.	S.E.
OECD	Australia	62.9	(1.6)	44.9	(0.9)	30.3	(1.2)	19.7	(1.3)	**10.6**	(1.8)
	Austria	69.5	(2.7)	45.2	(1.4)	28.7	(1.8)	23.6	(2.6)	5.1	(3.0)
	Belgium	72.8	(1.9)	47.3	(1.3)	26.2	(1.4)	17.8	(1.6)	**8.4**	(1.9)
	Canada	55.4	(2.3)	39.5	(1.0)	26.3	(1.3)	17.3	(1.4)	**9.0**	(1.7)
	Czech Republic	71.6	(2.0)	56.2	(1.7)	37.5	(1.9)	21.9	(1.8)	**15.6**	(2.3)
	Denmark	60.7	(2.2)	39.5	(1.5)	23.4	(1.8)	14.5	(2.7)	**8.9**	(3.2)
	Finland	62.3	(4.3)	46.9	(1.4)	32.6	(1.5)	24.4	(1.5)	**8.2**	(2.0)
	France	82.2	(1.9)	59.3	(1.6)	35.9	(2.2)	22.4	(2.9)	**13.5**	(3.4)
	Germany	69.1	(2.2)	46.1	(1.6)	25.6	(1.5)	13.3	(1.9)	**12.3**	(2.8)
	Greece	76.8	(1.8)	56.5	(1.6)	37.5	(2.7)	21.2	(3.9)	**16.3**	(4.5)
	Hungary	84.3	(1.9)	61.1	(1.5)	38.6	(2.2)	22.8	(2.8)	**15.8**	(3.4)
	Iceland	33.9	(1.7)	21.1	(1.0)	11.5	(1.6)	6.9	(1.9)	4.7	(2.7)
	Ireland	75.2	(2.2)	57.9	(1.4)	39.4	(2.4)	28.5	(2.7)	**10.9**	(2.9)
	Italy	70.2	(1.3)	53.0	(1.2)	36.9	(1.9)	25.4	(2.9)	**11.5**	(3.5)
	Japan	73.6	(2.2)	57.6	(1.4)	45.5	(1.8)	34.9	(2.2)	**10.6**	(3.0)
	Korea	69.6	(2.4)	56.3	(1.3)	43.0	(2.0)	29.4	(3.5)	**13.6**	(3.3)
	Luxembourg	74.3	(1.6)	42.5	(1.0)	21.4	(1.9)	12.1	(2.7)	**9.3**	(3.9)
	Mexico	86.4	(0.9)	64.4	(1.6)	35.1	(3.3)	c	c	c	c
	Netherlands	66.0	(3.0)	44.8	(1.4)	26.1	(2.0)	16.3	(1.9)	**9.8**	(2.9)
	New Zealand	73.1	(2.5)	51.8	(1.7)	34.4	(2.0)	21.6	(1.7)	**12.8**	(2.5)
	Norway	48.0	(2.3)	30.1	(1.2)	17.8	(1.9)	12.8	(2.9)	5.0	(3.6)
	Poland	87.9	(1.5)	72.0	(1.2)	54.5	(2.0)	36.2	(3.0)	**18.4**	(3.8)
	Portugal	88.5	(1.3)	69.3	(1.5)	46.1	(2.6)	31.3	(4.3)	**14.7**	(4.7)
	Slovak Republic	84.1	(1.8)	64.7	(1.2)	45.8	(2.4)	28.4	(3.9)	**17.4**	(4.7)
	Spain	81.9	(1.4)	65.7	(1.3)	43.9	(2.3)	32.2	(3.3)	**11.7**	(3.1)
	Sweden	59.6	(2.0)	40.7	(1.3)	25.2	(2.0)	14.7	(2.5)	**10.5**	(3.4)
	Switzerland	71.4	(1.9)	50.5	(1.1)	32.2	(1.4)	20.7	(2.1)	**11.4**	(2.8)
	Turkey	94.0	(0.7)	84.0	(1.4)	47.4	(5.9)	c	c	c	c
	United Kingdom	66.8	(1.9)	48.3	(1.0)	29.0	(1.4)	19.0	(1.6)	**10.0**	(1.9)
	United States	67.0	(2.4)	44.5	(1.7)	25.1	(2.2)	14.6	(2.7)	**10.5**	(3.1)
	OECD average	70.0	(0.4)	50.5	(0.3)	32.9	(0.4)	21.6	(0.5)	**11.3**	(0.6)
Partners	Argentina	83.5	(1.6)	54.8	(2.8)	27.1	(4.7)	c	c	c	c
	Azerbaijan	71.1	(1.3)	52.6	(2.6)	c	c	c	c	c	c
	Brazil	87.3	(0.8)	67.0	(1.6)	29.3	(4.5)	c	c	c	c
	Bulgaria	80.5	(1.5)	53.7	(2.1)	30.6	(3.6)	19.6	(4.4)	**11.0**	(4.9)
	Chile	89.0	(1.1)	68.3	(2.1)	34.7	(3.5)	c	c	c	c
	Colombia	85.9	(1.2)	67.2	(2.2)	c	c	c	c	c	c
	Croatia	76.3	(2.0)	62.1	(1.1)	45.0	(2.1)	27.5	(3.6)	**17.6**	(4.2)
	Estonia	66.7	(3.5)	51.4	(1.3)	36.1	(2.1)	22.6	(2.5)	**13.5**	(3.3)
	Hong Kong-China	87.8	(2.2)	81.8	(1.2)	73.3	(2.2)	64.4	(3.3)	**8.9**	(2.8)
	Indonesia	94.2	(0.7)	82.4	(2.0)	c	c	c	c	c	c
	Israel	56.3	(1.4)	34.6	(1.8)	20.3	(2.4)	12.8	(2.5)	**7.5**	(3.7)
	Jordan	78.4	(1.2)	58.7	(1.5)	34.0	(3.9)	c	c	c	c
	Kyrgyzstan	80.9	(0.9)	55.9	(3.1)	c	c	c	c	c	c
	Latvia	70.1	(2.4)	53.7	(1.3)	36.4	(2.3)	23.6	(4.0)	**12.9**	(4.5)
	Liechtenstein	70.9	(7.9)	47.6	(4.0)	34.4	(6.0)	18.2	(7.3)	16.2	(10.1)
	Lithuania	71.1	(1.7)	50.1	(1.4)	31.6	(2.2)	17.2	(3.6)	**14.5**	(4.3)
	Macao-China	87.4	(2.1)	86.9	(0.7)	83.4	(1.5)	74.9	(3.3)	**8.5**	(4.0)
	Montenegro	60.0	(1.1)	43.0	(1.3)	23.8	(5.9)	c	c	c	c
	Qatar	40.9	(0.6)	24.3	(1.2)	c	c	c	c	c	c
	Romania	80.0	(1.4)	60.4	(2.3)	27.8	(4.7)	c	c	c	c
	Russian Federation	72.3	(1.9)	56.1	(1.4)	39.5	(2.8)	26.9	(4.1)	**12.6**	(4.6)
	Serbia	73.8	(1.4)	54.8	(1.4)	33.0	(3.9)	c	c	c	c
	Slovenia	72.8	(1.7)	54.7	(1.2)	32.9	(1.9)	20.6	(2.9)	**12.3**	(4.0)
	Chinese Taipei	84.5	(1.7)	72.6	(1.1)	57.2	(1.4)	43.0	(1.9)	14.2	(2.3)
	Thailand	95.4	(0.5)	82.7	(1.3)	48.1	(4.5)	c	c	c	c
	Tunisia	85.9	(1.4)	67.2	(3.2)	c	c	c	c	c	c
	Uruguay	80.6	(1.4)	57.9	(1.5)	31.9	(2.9)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A2.6a Percentage of students in schools with no top performers

		Percentage of students in schools with no top performers	
		%	S.E.
OECD	Australia	5.6	(1.7)
	Austria	40.7	(3.7)
	Belgium	37.3	(2.9)
	Canada	12.2	(2.3)
	Czech Republic	40.0	(4.4)
	Denmark	32.8	(4.0)
	Finland	0.7	(0.7)
	France	49.6	(3.1)
	Germany	42.2	(3.3)
	Greece	52.6	(3.8)
	Hungary	52.4	(3.7)
	Iceland	18.1	(4.8)
	Ireland	18.7	(3.5)
	Italy	56.6	(2.5)
	Japan	24.9	(3.2)
	Korea	22.9	(3.1)
	Luxembourg	17.3	(2.8)
	Mexico	c	c
	Netherlands	47.8	(3.0)
	New Zealand	5.8	(1.8)
	Norway	30.5	(4.2)
	Poland	22.5	(5.4)
	Portugal	52.9	(4.3)
	Slovak Republic	52.0	(3.8)
	Spain	38.3	(3.4)
	Sweden	21.8	(3.8)
	Switzerland	36.1	(2.9)
	Turkey	c	c
	United Kingdom	12.0	(2.4)
	United States	21.6	(3.6)
	OECD average	30.9	(0.6)
Partners	Argentina	c	c
	Azerbaijan	c	c
	Brazil	c	c
	Bulgaria	70.6	(4.2)
	Chile	c	c
	Colombia	c	c
	Croatia	54.3	(3.7)
	Estonia	17.6	(3.0)
	Hong Kong-China	18.7	(3.5)
	Indonesia	c	c
	Israel	42.3	(4.7)
	Jordan	c	c
	Kyrgyzstan	c	c
	Latvia	45.6	(4.5)
	Liechtenstein	48.1	(8.2)
	Lithuania	48.0	(4.7)
	Macao-China	6.1	(3.3)
	Montenegro	c	c
	Qatar	c	c
	Romania	c	c
	Russian Federation	47.3	(4.6)
	Serbia	c	c
	Slovenia	47.3	(2.8)
	Chinese Taipei	28.1	(3.4)
	Thailand	c	c
	Tunisia	c	c
	Uruguay	c	c



[Part 1/1]

Table A2.6b School average performance in science, by performance group

		School average performance in science									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean scores between schools with strong performers and schools with top performers	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Dif.	S.E.
OECD	Australia	496	(2.4)	519	(1.9)	539	(2.2)	560	(4.4)	**-20.9**	(3.3)
	Austria	421	(7.5)	503	(2.6)	559	(3.3)	582	(3.6)	**-22.6**	(3.3)
	Belgium	425	(6.6)	501	(2.0)	559	(1.7)	582	(2.3)	**-23.3**	(2.2)
	Canada	490	(5.2)	528	(1.8)	548	(1.7)	561	(2.2)	**-13.3**	(2.2)
	Czech Republic	441	(6.9)	498	(2.9)	554	(3.3)	599	(4.5)	**-44.5**	(5.0)
	Denmark	469	(5.2)	496	(2.5)	512	(3.3)	525	(4.7)	**-13.2**	(4.0)
	Finland	544	(3.7)	558	(1.8)	567	(2.0)	573	(2.3)	**-5.9**	(1.4)
	France	412	(4.4)	492	(2.6)	555	(2.9)	577	(4.9)	**-22.1**	(4.7)
	Germany	418	(6.1)	505	(3.0)	563	(2.5)	593	(3.0)	**-29.9**	(3.1)
	Greece	411	(5.3)	486	(2.3)	513	(3.1)	528	(4.0)	**-15.6**	(3.3)
	Hungary	421	(3.7)	497	(2.3)	554	(3.0)	589	(4.7)	**-34.9**	(4.2)
	Iceland	475	(1.0)	490	(0.6)	501	(1.2)	515	(3.3)	**-13.8**	(3.7)
	Ireland	475	(5.3)	507	(2.6)	525	(2.9)	534	(3.6)	**-9.5**	(2.7)
	Italy	411	(2.9)	482	(1.8)	533	(2.4)	558	(2.9)	**-25.1**	(3.1)
	Japan	449	(5.0)	512	(3.3)	563	(2.7)	601	(3.2)	**-38.3**	(3.9)
	Korea	458	(7.8)	514	(2.1)	548	(3.5)	569	(7.9)	**-21.9**	(5.4)
	Luxembourg	445	(1.2)	486	(0.9)	522	(1.6)	538	(2.1)	**-16.0**	(2.9)
	Mexico	378	(3.1)	438	(2.2)	497	(6.0)	c	c	c	c
	Netherlands	427	(4.4)	501	(2.6)	577	(2.5)	606	(2.5)	**-29.7**	(2.7)
	New Zealand	494	(5.3)	525	(2.3)	544	(2.3)	555	(2.9)	**-11.5**	(2.6)
	Norway	466	(5.3)	487	(2.5)	501	(2.8)	511	(5.2)	**-10.1**	(4.7)
	Poland	478	(3.2)	495	(2.1)	512	(2.5)	529	(4.1)	**-17.1**	(3.3)
	Portugal	431	(5.1)	481	(2.4)	511	(2.9)	526	(7.2)	**-14.8**	(7.3)
	Slovak Republic	430	(4.9)	487	(2.4)	535	(3.3)	566	(5.0)	**-31.5**	(4.5)
	Spain	462	(2.6)	487	(2.3)	510	(3.0)	526	(5.3)	**-15.8**	(4.0)
	Sweden	479	(5.2)	502	(1.9)	516	(2.2)	526	(3.2)	**-9.8**	(2.7)
	Switzerland	452	(5.7)	500	(2.3)	544	(2.9)	585	(4.5)	**-40.7**	(3.7)
	Turkey	390	(2.6)	440	(3.2)	538	(10.3)	c	c	c	c
	United Kingdom	476	(5.8)	508	(1.9)	532	(2.1)	558	(3.2)	**-26.0**	(3.5)
	United States	449	(8.2)	490	(3.0)	517	(3.7)	533	(6.1)	**-16.5**	(4.8)
	OECD average	454	(1.0)	501	(0.4)	536	(0.5)	557	(0.8)	**-21.2**	(0.7)
Partners	Argentina	355	(5.4)	433	(4.9)	477	(8.1)	c	c	c	c
	Azerbaijan	368	(2.0)	418	(4.3)	c	c	c	c	c	c
	Brazil	362	(1.9)	426	(3.2)	509	(7.8)	c	c	c	c
	Bulgaria	379	(5.5)	459	(4.5)	520	(7.8)	559	(10.9)	**-39.0**	(9.2)
	Chile	398	(3.2)	453	(3.9)	513	(5.6)	c	c	c	c
	Colombia	371	(3.7)	411	(3.2)	c	c	c	c	c	c
	Croatia	445	(4.0)	489	(2.3)	533	(2.6)	569	(4.5)	**-35.2**	(4.5)
	Estonia	492	(5.2)	523	(2.3)	546	(2.5)	563	(3.7)	**-17.2**	(3.0)
	Hong Kong-China	472	(7.6)	524	(2.1)	565	(2.3)	592	(4.0)	**-27.0**	(3.9)
	Indonesia	368	(2.7)	431	(7.2)	c	c	c	c	c	c
	Israel	416	(5.0)	463	(3.3)	498	(4.7)	516	(6.5)	**-17.1**	(5.8)
	Jordan	402	(2.8)	434	(2.5)	469	(9.8)	c	c	c	c
	Kyrgyzstan	311	(2.7)	386	(5.5)	c	c	c	c	c	c
	Latvia	462	(4.3)	490	(2.6)	510	(3.3)	525	(4.1)	**-15.2**	(4.6)
	Liechtenstein	434	(6.5)	499	(3.8)	572	(5.4)	606	(4.7)	**-34.8**	(7.6)
	Lithuania	452	(2.9)	485	(2.2)	519	(4.4)	552	(10.7)	**-33.2**	(9.1)
	Macao-China	480	(1.6)	508	(0.4)	526	(0.9)	539	(2.8)	**-13.6**	(3.3)
	Montenegro	393	(0.6)	428	(0.8)	469	(4.9)	c	c	c	c
	Qatar	333	(0.4)	401	(1.6)	c	c	c	c	c	c
	Romania	382	(4.1)	446	(3.5)	497	(7.4)	c	c	c	c
	Russian Federation	445	(4.6)	481	(3.2)	510	(3.9)	527	(4.9)	**-17.1**	(4.9)
	Serbia	400	(3.3)	452	(2.6)	496	(4.4)	c	c	c	c
	Slovenia	418	(2.4)	501	(1.5)	568	(1.9)	611	(2.0)	**-43.5**	(3.1)
	Chinese Taipei	459	(5.4)	509	(3.3)	564	(2.6)	603	(3.8)	**-39.3**	(4.2)
	Thailand	398	(2.2)	436	(2.2)	489	(5.2)	c	c	c	c
	Tunisia	363	(2.2)	420	(4.1)	c	c	c	c	c	c
	Uruguay	386	(3.7)	453	(1.9)	491	(4.0)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A2.7 Average socio-economic background of school, by performance group

		School average PISA index of economic, social and cultural status (ESCS)									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between schools with strong performers and schools with top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.01	(0.02)	0.15	(0.01)	0.29	(0.02)	0.42	(0.02)	**-0.14**	(0.02)
	Austria	-0.27	(0.06)	0.15	(0.02)	0.44	(0.03)	0.58	(0.04)	**-0.14**	(0.03)
	Belgium	-0.30	(0.03)	0.10	(0.02)	0.45	(0.03)	0.59	(0.04)	**-0.14**	(0.03)
	Canada	0.16	(0.03)	0.32	(0.02)	0.44	(0.02)	0.52	(0.02)	**-0.08**	(0.02)
	Czech Republic	-0.28	(0.04)	-0.05	(0.02)	0.20	(0.02)	0.45	(0.04)	**-0.25**	(0.04)
	Denmark	0.15	(0.03)	0.30	(0.03)	0.41	(0.03)	0.52	(0.05)	**-0.10**	(0.03)
	Finland	0.20	(0.03)	0.22	(0.02)	0.27	(0.02)	0.31	(0.03)	**-0.03**	(0.02)
	France	-0.54	(0.04)	-0.12	(0.03)	0.23	(0.03)	0.35	(0.05)	**-0.12**	(0.03)
	Germany	-0.25	(0.05)	0.21	(0.03)	0.56	(0.02)	0.74	(0.03)	**-0.18**	(0.03)
	Greece	-0.54	(0.04)	-0.09	(0.03)	0.15	(0.06)	0.33	(0.07)	**-0.18**	(0.05)
	Hungary	-0.72	(0.04)	-0.15	(0.03)	0.31	(0.04)	0.60	(0.05)	**-0.28**	(0.04)
	Iceland	0.73	(0.01)	0.76	(0.01)	0.81	(0.02)	0.85	(0.04)	-0.04	(0.05)
	Ireland	-0.26	(0.04)	-0.04	(0.03)	0.12	(0.04)	0.18	(0.05)	-0.07	(0.03)
	Italy	-0.41	(0.02)	-0.04	(0.02)	0.24	(0.03)	0.40	(0.04)	**-0.16**	(0.03)
	Japan	-0.32	(0.02)	-0.09	(0.02)	0.10	(0.02)	0.24	(0.02)	**-0.14**	(0.02)
	Korea	-0.32	(0.04)	-0.08	(0.02)	0.14	(0.03)	0.32	(0.07)	**-0.17**	(0.05)
	Luxembourg	-0.31	(0.01)	0.08	(0.01)	0.42	(0.02)	0.58	(0.02)	**-0.16**	(0.03)
	Mexico	-1.38	(0.05)	-0.64	(0.04)	0.05	(0.07)	c	c	c	c
	Netherlands	-0.25	(0.06)	0.13	(0.02)	0.51	(0.03)	0.67	(0.03)	**-0.16**	(0.03)
	New Zealand	-0.11	(0.03)	0.05	(0.02)	0.19	(0.02)	0.28	(0.03)	**-0.09**	(0.03)
	Norway	0.34	(0.03)	0.41	(0.02)	0.49	(0.02)	0.55	(0.04)	**-0.06**	(0.03)
	Poland	-0.44	(0.03)	-0.33	(0.02)	-0.20	(0.03)	-0.05	(0.05)	**-0.15**	(0.04)
	Portugal	-1.02	(0.05)	-0.58	(0.04)	-0.20	(0.06)	0.02	(0.12)	-0.23	(0.12)
	Slovak Republic	-0.52	(0.05)	-0.17	(0.03)	0.16	(0.03)	0.46	(0.05)	**-0.31**	(0.04)
	Spain	-0.55	(0.04)	-0.34	(0.03)	-0.07	(0.05)	0.12	(0.08)	**-0.19**	(0.06)
	Sweden	0.11	(0.04)	0.23	(0.02)	0.30	(0.02)	0.37	(0.03)	**-0.07**	(0.03)
	Switzerland	-0.16	(0.02)	0.01	(0.02)	0.25	(0.02)	0.46	(0.03)	**-0.21**	(0.03)
	Turkey	-1.54	(0.04)	-1.18	(0.04)	-0.29	(0.14)	c	c	c	c
	United Kingdom	-0.02	(0.02)	0.13	(0.02)	0.29	(0.02)	0.45	(0.02)	**-0.16**	(0.02)
	United States	-0.12	(0.05)	0.12	(0.03)	0.33	(0.05)	0.48	(0.06)	**-0.14**	(0.04)
	OECD average	-0.21	(0.01)	0.05	(0.00)	0.27	(0.01)	0.42	(0.01)	**-0.15**	(0.01)
Partners	Argentina	-0.96	(0.05)	-0.27	(0.07)	0.20	(0.11)	c	c	c	c
	Azerbaijan	-0.53	(0.03)	-0.24	(0.07)	c	c	c	c	c	c
	Brazil	-1.40	(0.03)	-0.78	(0.04)	0.18	(0.12)	c	c	c	c
	Bulgaria	-0.63	(0.05)	-0.02	(0.04)	0.43	(0.07)	0.65	(0.09)	**-0.23**	(0.07)
	Chile	-1.16	(0.05)	-0.53	(0.06)	0.23	(0.08)	c	c	c	c
	Colombia	-1.20	(0.06)	-0.74	(0.05)	c	c	c	c	c	c
	Estonia	-0.05	(0.04)	0.09	(0.02)	0.22	(0.03)	0.34	(0.04)	**-0.13**	(0.03)
	Hong Kong-China	-0.95	(0.05)	-0.79	(0.03)	-0.56	(0.04)	-0.40	(0.06)	**-0.17**	(0.03)
	Croatia	-0.37	(0.03)	-0.15	(0.02)	0.14	(0.03)	0.41	(0.04)	**-0.27**	(0.04)
	Indonesia	-1.74	(0.04)	-1.19	(0.07)	c	c	c	c	c	c
	Israel	0.05	(0.03)	0.24	(0.02)	0.43	(0.03)	0.51	(0.04)	**-0.08**	(0.03)
	Jordan	-0.75	(0.04)	-0.47	(0.03)	-0.13	(0.10)	c	c	c	c
	Kyrgyzstan	-0.73	(0.02)	-0.21	(0.06)	c	c	c	c	c	c
	Liechtenstein	-0.31	(0.04)	0.08	(0.02)	0.44	(0.03)	0.63	(0.03)	**-0.19**	(0.04)
	Lithuania	-0.22	(0.03)	0.01	(0.03)	0.28	(0.04)	0.54	(0.09)	**-0.26**	(0.07)
	Latvia	-0.22	(0.04)	-0.02	(0.02)	0.12	(0.03)	0.26	(0.05)	**-0.14**	(0.04)
	Macao-China	-1.02	(0.02)	-0.94	(0.01)	-0.83	(0.01)	-0.69	(0.04)	**-0.14**	(0.04)
	Montenegro	-0.15	(0.01)	0.08	(0.01)	0.41	(0.04)	c	c	c	c
	Qatar	0.15	(0.00)	0.42	(0.01)	c	c	c	c	c	c
	Romania	-0.63	(0.05)	-0.19	(0.04)	0.32	(0.09)	c	c	c	c
	Russian Federation	-0.25	(0.03)	-0.10	(0.03)	0.04	(0.04)	0.17	(0.07)	**-0.13**	(0.05)
	Serbia	-0.38	(0.03)	-0.03	(0.03)	0.35	(0.06)	c	c	c	c
	Slovenia	-0.37	(0.02)	0.02	(0.02)	0.39	(0.02)	0.63	(0.01)	**-0.24**	(0.02)
	Chinese Taipei	-0.65	(0.04)	-0.42	(0.03)	-0.17	(0.02)	0.02	(0.03)	**-0.20**	(0.03)
	Thailand	-1.74	(0.03)	-1.25	(0.04)	-0.36	(0.11)	c	c	c	c
	Tunisia	-1.45	(0.06)	-0.85	(0.10)	c	c	c	c	c	c
	Uruguay	-0.88	(0.04)	-0.32	(0.03)	0.18	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/3]

Table A2.8a Percentage of students by performance group, by school type

		Government or public schools (Schools which are directly controlled or managed by: *i)* a public education authority or agency, or *ii)* a government agency directly or a governing body, most of whose members are either appointed by a public authority or elected by public franchise)		Government-dependent private schools (schools which receive 50% or more of their core funding - funding that supports the basic educational services of the institution – from government agencies)		Government-independent private school (schools which receive less than 50% of their core funding – funding that supports the basic educational services of the institution – from government agencies)	
		% of students	S.E.	% of students	S.E.	% of students	S.E.
OECD	Australia	w	w	w	w	w	w
	Austria	90.7	(2.2)	8.4	(2.2)	0.9	(0.6)
	Belgium	w	w	w	w	w	w
	Canada	93.0	(0.7)	4.3	(0.3)	2.7	(0.7)
	Czech Republic	96.2	(1.8)	3.5	(1.8)	0.2	(0.2)
	Denmark	76.1	(3.1)	22.8	(3.0)	1.1	(0.8)
	Finland	97.6	(1.1)	2.4	(1.1)	0.0	(0.0)
	France	w	w	w	w	w	w
	Germany	94.3	(1.8)	5.5	(1.8)	0.2	(0.2)
	Greece	94.9	(1.2)	0.0	(0.0)	5.1	(1.2)
	Hungary	84.2	(3.4)	13.1	(3.1)	2.7	(1.6)
	Iceland	98.9	(0.1)	1.0	(0.1)	0.1	(0.1)
	Ireland	41.8	(1.4)	54.8	(2.0)	3.4	(1.5)
	Italy	96.4	(0.7)	1.2	(0.4)	2.4	(0.6)
	Japan	70.1	(1.4)	1.0	(1.0)	28.9	(1.6)
	Korea	53.7	(3.9)	31.5	(3.7)	14.8	(2.5)
	Luxembourg	85.6	(0.0)	14.4	(0.0)	0.0	(0.0)
	Mexico	89.7	(1.5)	0.0	(0.0)	10.3	(1.5)
	Netherlands	33.0	(4.3)	67.0	(4.3)	0.0	(0.0)
	New Zealand	95.5	(0.6)	0.0	(0.0)	4.5	(0.6)
	Norway	98.1	(0.9)	1.9	(0.9)	0.0	(0.0)
	Poland	98.4	(0.1)	1.0	(0.2)	0.6	(0.2)
	Portugal	91.1	(1.3)	6.9	(1.3)	2.1	(0.3)
	Slovak Republic	92.3	(1.9)	7.2	(1.8)	0.5	(0.5)
	Spain	65.3	(1.0)	24.6	(1.4)	10.1	(1.5)
	Sweden	91.7	(0.8)	8.3	(0.8)	0.0	(0.0)
	Switzerland	95.5	(0.6)	0.9	(0.4)	3.6	(0.4)
	Turkey	99.5	(0.5)	0.0	(0.0)	0.5	(0.5)
	United Kingdom	93.8	(1.0)	0.2	(0.1)	6.0	(1.0)
	United States	92.6	(1.2)	0.8	(0.8)	6.6	(0.9)
	OECD average	85.6	(0.3)	10.5	(0.3)	4.1	(0.2)
Partners	Argentina	67.5	(3.7)	24.8	(3.1)	7.7	(2.6)
	Azerbaijan	99.1	(0.4)	0.0	(0.0)	0.9	(0.4)
	Brazil	92.4	(1.4)	0.0	(0.0)	7.6	(1.4)
	Bulgaria	m	m	m	m	m	m
	Chile	46.9	(2.9)	44.9	(3.3)	8.2	(2.0)
	Colombia	82.7	(2.8)	5.1	(2.5)	12.3	(2.2)
	Croatia	98.6	(1.0)	0.6	(0.4)	0.7	(0.5)
	Estonia	98.1	(0.9)	1.4	(0.8)	0.6	(0.4)
	Hong Kong-China	7.5	(0.2)	90.7	(1.4)	1.9	(1.4)
	Indonesia	60.7	(3.6)	13.5	(3.0)	25.8	(2.9)
	Israel	73.4	(4.0)	20.3	(3.6)	6.3	(1.9)
	Jordan	80.6	(1.7)	1.3	(0.9)	18.1	(1.5)
	Kyrgyzstan	99.4	(0.4)	0.0	(0.0)	0.6	(0.4)
	Latvia	100.0	(0.0)	0.0	(0.0)	0.0	(0.0)
	Liechtenstein	c	c	c	c	c	c
	Lithuania	99.3	(0.7)	0.7	(0.7)	0.0	(0.0)
	Macao-China	3.8	(0.0)	68.5	(0.1)	27.6	(0.1)
	Montenegro	99.8	(0.0)	0.0	(0.0)	0.2	c
	Qatar	91.1	(0.1)	0.1	(0.0)	8.8	(0.1)
	Romania	100.0	(0.0)	0.0	(0.0)	0.0	a
	Russian Federation	100.0	(0.0)	0.0	(0.0)	0.0	a
	Serbia	99.4	(0.7)	0.6	(0.7)	0.0	a
	Slovenia	97.7	(0.0)	2.3	(0.0)	0.1	c
	Chinese Taipei	65.0	(2.4)	0.0	(0.0)	35.0	(2.4)
	Thailand	83.5	(0.7)	6.1	(1.7)	10.5	(1.7)
	Tunisia	98.2	(1.0)	1.8	(1.0)	0.0	a
	Uruguay	84.9	(0.8)	0.0	(0.0)	15.1	(0.8)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 2/3]

Table A2.8a Percentage of students by performance group, by school type

		Public schools								Private schools (government-dependent and government-independent)							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
	Austria	16.0	(1.3)	50.7	(1.4)	23.6	(1.1)	9.7	(0.8)	19.8	(8.2)	43.9	(6.7)	23.9	(4.0)	12.4	(2.3)
	Belgium	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
	Canada	10.4	(0.6)	48.8	(0.8)	27.3	(0.7)	13.6	(0.6)	2.8	(0.6)	37.7	(2.7)	34.5	(2.2)	25.0	(2.3)
	Czech Republic	15.8	(1.3)	50.1	(1.4)	22.2	(0.9)	11.9	(1.0)	13.2	(6.9)	63.6	(5.0)	17.4	(4.4)	5.9	(3.1)
	Denmark	19.2	(1.2)	56.5	(1.3)	18.7	(1.2)	5.6	(0.6)	15.8	(2.7)	51.4	(2.2)	22.9	(2.3)	9.9	(1.9)
	Finland	3.9	(0.4)	43.0	(1.1)	32.4	(0.9)	20.7	(0.8)	c	c	c	c	c	c	c	c
	France	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
	Germany	15.6	(1.4)	49.7	(1.2)	23.4	(0.9)	11.3	(0.7)	10.1	(5.1)	35.9	(5.9)	31.2	(5.9)	22.8	(6.7)
	Greece	25.3	(1.3)	58.6	(1.2)	13.2	(0.9)	2.9	(0.3)	3.3	(1.5)	55.3	(3.9)	29.5	(4.2)	11.9	(2.6)
	Hungary	15.7	(1.2)	58.4	(1.5)	20.0	(1.2)	5.9	(0.9)	7.7	(2.7)	51.6	(5.5)	28.0	(4.3)	12.8	(3.5)
	Iceland	20.6	(0.8)	54.2	(0.9)	18.9	(0.7)	6.2	(0.5)	c	c	c	c	c	c	c	c
	Ireland	21.7	(2.1)	54.8	(1.7)	17.0	(1.1)	6.5	(0.9)	11.6	(1.1)	53.2	(1.3)	24.2	(1.1)	11.1	(1.0)
	Italy	24.8	(0.9)	55.4	(0.9)	15.2	(0.6)	4.7	(0.4)	33.3	(6.4)	47.9	(3.6)	15.1	(4.7)	3.7	(1.2)
	Japan	11.0	(1.2)	44.7	(1.4)	28.0	(1.4)	16.3	(0.9)	14.3	(1.9)	48.7	(2.0)	24.7	(1.8)	12.3	(1.5)
	Korea	11.3	(1.6)	51.5	(2.2)	26.2	(1.5)	11.0	(1.6)	11.2	(1.9)	54.6	(1.9)	24.7	(1.5)	9.6	(1.4)
	Luxembourg	21.5	(0.6)	52.7	(1.1)	19.3	(0.7)	6.5	(0.4)	25.6	(2.1)	61.3	(2.3)	10.7	(1.5)	2.4	(0.8)
	Mexico	54.7	(1.4)	42.6	(1.3)	2.5	(0.3)	0.1	(0.1)	30.3	(4.1)	61.4	(3.1)	7.3	(1.5)	1.0	(0.4)
	Netherlands	14.1	(3.2)	46.3	(3.7)	25.9	(2.9)	13.6	(2.3)	12.4	(1.1)	48.9	(1.8)	25.8	(1.5)	12.9	(1.1)
	New Zealand	14.3	(0.8)	45.7	(0.9)	23.4	(0.9)	16.6	(0.8)	3.4	(1.2)	29.4	(3.0)	32.9	(4.0)	34.3	(3.7)
	Norway	21.5	(1.3)	56.1	(1.1)	16.6	(0.8)	5.7	(0.5)	c	c	c	c	c	c	c	c
	Poland	17.1	(0.8)	57.2	(0.9)	19.1	(0.8)	6.5	(0.5)	c	c	c	c	c	c	c	c
	Portugal	25.7	(1.5)	57.1	(1.4)	14.3	(1.0)	2.9	(0.3)	13.2	(3.0)	62.2	(3.5)	19.1	(2.1)	5.5	(2.1)
	Slovak Republic	20.6	(1.0)	56.0	(1.3)	17.9	(1.1)	5.5	(0.6)	17.1	(4.3)	55.7	(3.2)	18.1	(3.1)	9.1	(2.4)
	Spain	23.6	(1.1)	58.3	(0.8)	14.6	(0.8)	3.6	(0.4)	12.5	(1.2)	56.4	(1.6)	23.9	(1.4)	7.3	(0.8)
	Sweden	16.9	(0.8)	55.3	(1.0)	20.4	(0.9)	7.4	(0.5)	11.0	(2.5)	47.8	(2.9)	28.4	(3.9)	12.8	(2.3)
	Switzerland	16.1	(0.9)	50.0	(1.2)	23.3	(1.1)	10.5	(0.8)	17.6	(4.8)	45.1	(3.7)	25.8	(4.1)	11.6	(2.9)
	Turkey	46.7	(1.7)	46.1	(1.5)	6.2	(1.2)	0.9	(0.3)	c	c	c	c	c	c	c	c
	United Kingdom	17.4	(0.9)	49.0	(0.9)	21.1	(0.7)	12.5	(0.6)	2.0	(0.9)	30.5	(3.8)	31.2	(2.3)	36.3	(3.6)
	United States	25.3	(1.7)	48.9	(1.3)	17.5	(1.0)	8.3	(0.7)	8.9	(3.1)	43.5	(4.4)	28.3	(4.0)	19.3	(4.0)
	OECD average	20.3	(0.3)	51.8	(0.3)	19.6	(0.2)	8.4	(0.2)	13.5	(0.8)	49.3	(0.8)	24.0	(0.7)	13.2	(0.6)
Partners	Argentina	68.0	(2.1)	29.8	(1.9)	2.0	(0.5)	0.2	(0.1)	33.5	(3.9)	57.5	(3.3)	8.0	(1.4)	1.0	(0.3)
	Azerbaijan	73.0	(1.8)	26.6	(1.8)	0.4	(0.1)	0	a	c	c	c	c	c	c	c	c
	Brazil	67.6	(1.4)	31.1	(1.3)	1.3	(0.3)	0.1	(0.0)	18.9	(3.9)	60.3	(3.3)	17.1	(2.2)	3.7	(1.5)
	Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	52.8	(3.0)	41.5	(2.3)	4.4	(1.1)	1.2	(0.6)	29.3	(2.2)	56.6	(1.7)	11.6	(1.4)	2.5	(0.5)
	Colombia	64.6	(2.0)	34.1	(1.9)	1.2	(0.4)	0.1	(0.0)	39.4	(4.0)	54.9	(4.2)	5.1	(1.4)	0.6	(0.2)
	Croatia	16.8	(0.9)	60.3	(1.0)	17.7	(0.9)	5.1	(0.5)	c	c	c	c	c	c	c	c
	Estonia	7.7	(0.6)	55.0	(1.0)	26.0	(1.0)	11.3	(0.7)	c	c	c	c	c	c	c	c
	Hong Kong-China	6.4	(1.6)	35.0	(4.6)	31.9	(3.7)	26.8	(5.9)	8.9	(0.9)	46.5	(1.2)	29.5	(0.9)	15.0	(0.9)
	Indonesia	55.8	(4.2)	42.4	(3.5)	1.8	(0.8)	0.0	(0.0)	70.4	(3.6)	28.8	(3.4)	0.7	(0.4)	0.1	(0.1)
	Israel	37.9	(1.9)	44.4	(1.3)	12.9	(0.9)	4.8	(0.7)	31.7	(3.0)	45.7	(2.0)	16.3	(1.9)	6.3	(1.2)
	Jordan	49.6	(1.3)	46.2	(1.2)	3.9	(0.6)	0.3	(0.2)	23.5	(2.0)	62.3	(1.8)	12.4	(2.0)	1.8	(0.8)
	Kyrgyzstan	87.2	(1.0)	12.2	(0.9)	0.7	(0.2)	0.0	(0.0)	c	c	c	c	c	c	c	c
	Latvia	17.4	(1.2)	61.9	(1.2)	16.6	(1.0)	4.1	(0.4)	c	c	c	c	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	20.5	(1.0)	57.6	(1.1)	17.3	(0.9)	4.6	(0.6)	c	c	c	c	c	c	c	c
	Macao-China	26.8	(2.8)	60.2	(3.6)	11.2	(2.7)	1.8	(1.0)	9.6	(0.5)	61.7	(0.8)	23.2	(0.7)	5.4	(0.4)
	Montenegro	49.9	(1.0)	46.1	(1.1)	3.7	(0.4)	0.3	(0.1)	c	c	c	c	c	c	c	c
	Qatar	84.2	(0.5)	15.5	(0.5)	0.3	(0.1)	0	a	48.2	(1.7)	40.3	(2.1)	9.3	(1.0)	2.2	(0.6)
	Romania	46.9	(2.4)	48.4	(2.3)	4.2	(0.8)	0.5	(0.1)	c	c	c	c	c	c	c	c
	Russian Federation	22.2	(1.4)	58.5	(1.1)	15.1	(1.1)	4.2	(0.5)	c	c	c	c	c	c	c	c
	Serbia	38.5	(1.6)	54.1	(1.4)	6.6	(0.6)	0.8	(0.2)	c	c	c	c	c	c	c	c
	Slovenia	14.1	(0.6)	51.3	(1.1)	22.5	(1.1)	12.2	(0.6)	c	c	c	c	c	c	c	c
	Chinese Taipei	8.1	(0.8)	42.3	(1.4)	31.3	(1.1)	18.3	(1.2)	18.2	(2.3)	52.4	(2.1)	21.5	(2.2)	7.8	(1.2)
	Thailand	45.7	(1.2)	49.8	(1.1)	4.1	(0.5)	0.4	(0.1)	48.1	(3.7)	48.1	(3.4)	3.7	(1.3)	0.2	(0.2)
	Tunisia	61.9	(1.4)	35.9	(1.2)	2.0	(0.5)	0.1	(0.1)	c	c	c	c	c	c	c	c
	Uruguay	47.2	(1.5)	47.1	(1.3)	4.9	(0.6)	0.7	(0.2)	15.0	(2.0)	61.9	(2.8)	17.8	(1.9)	5.3	(1.1)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 3/3]

Table A2.8a Percentage of students by performance group, by school type

		Difference in the percentages of top performers between private schools and public schools		If students' ESCS were equal to the national average ESCS			If students' ESCS were equal to the national average ESCS and also adjusted for school ESCS		
				Difference in the percentages of top performers between students in private schools and students in public schools	Increase in the logit of being a top performer associated with being in a private school, after adjusting students' socio-economic background		Difference in the percentages of top performers between students in private schools and students in public schools	Increase in the logit of being a top performer associated with being in a private school, after adjusting students' socio-economic background	
		%	S.E.	Dif.	Logistic regression coefficient	S.E.	Dif.	Logistic regression coefficient	S.E.
OECD	Australia	w	w	w	w	w	w	w	w
	Austria	2.7	(2.4)	1.1	0.13	(0.21)	-1.7	-0.28	(0.28)
	Belgium	w	w	w	w	w	w	w	w
	Canada	**11.4**	(2.4)	**6.2**	**0.46**	(0.13)	2.3	0.19	(0.13)
	Czech Republic	-6.0	(3.3)	-5.8	-1.00	(0.55)	**-4.6**	**-1.05**	(0.48)
	Denmark	**4.3**	(1.9)	2.2	0.41	(0.23)	1.4	0.26	(0.25)
	Finland	c	c	c	c	c	c	c	c
	France	w	w	w	w	w	w	w	w
	Germany	11.5	(7.0)	6.8	0.61	(0.41)	0.7	0.09	(0.42)
	Greece	**8.9**	(2.6)	1.6	0.54	(0.33)	-0.9	-0.50	(0.50)
	Hungary	6.9	(4.0)	2.3	0.43	(0.41)	-0.5	-0.17	(0.45)
	Iceland	c	c	c	c	c	c	c	c
	Ireland	**4.6**	(1.3)	2.2	0.30	(0.17)	1.1	0.16	(0.18)
	Italy	-1.0	(1.2)	-1.4	-0.50	(0.29)	**-2.1**	**-1.28**	(0.28)
	Japan	**-4.0**	(1.9)	**-6.2**	**-0.55**	(0.17)	**-10.3**	**-1.27**	(0.21)
	Korea	-1.4	(2.1)	-1.0	-0.12	(0.20)	-0.7	-0.09	(0.17)
	Luxembourg	**-4.0**	(0.9)	**-2.9**	**-0.94**	(0.40)	-2.0	-0.79	(0.40)
	Mexico	0.9	(0.4)	0.1	0.90	(0.64)	0.0	-0.94	(0.64)
	Netherlands	-0.7	(2.9)	-0.1	-0.01	(0.20)	1.8	0.25	(0.19)
	New Zealand	**17.7**	(3.9)	**6.7**	**0.45**	(0.17)	0.8	0.06	(0.20)
	Norway	c	c	c	c	c	c	c	c
	Poland	c	c	c	c	c	c	c	c
	Portugal	2.6	(2.1)	0.5	0.26	(0.43)	-0.1	-0.06	(0.41)
	Slovak Republic	3.6	(2.6)	1.0	0.23	(0.31)	-0.9	-0.35	(0.40)
	Spain	**3.7**	(0.9)	0.9	0.23	(0.14)	-0.7	-0.21	(0.16)
	Sweden	**5.4**	(2.3)	2.8	0.39	(0.22)	1.5	0.23	(0.25)
	Switzerland	1.0	(2.9)	-2.4	-0.34	(0.32)	**-5.5**	**-1.39**	(0.47)
	Turkey	c	c	c	c	c	c	c	c
	United Kingdom	**23.8**	(3.7)	**12.1**	**0.87**	(0.16)	1.7	0.16	(0.20)
	United States	**11.0**	(4.0)	3.0	0.40	(0.25)	-0.4	-0.06	(0.29)
	OECD average	**4.7**	(0.6)	**1.3**	**0.14**	(0.07)	**-0.9**	**-0.32**	(0.07)
Partners	Argentina	0.8	(0.4)	0.2	0.97	(0.87)	-0.1	-0.46	(1.32)
	Azerbaijan	c	c	c	c	c	c	c	c
	Brazil	3.6	(1.5)	0.3	2.53	(0.90)	0.0	-1.35	(0.80)
	Bulgaria	m	m	m	m	m	m	m	m
	Chile	1.3	(0.8)	-0.3	-0.36	(0.50)	-1.0	-1.52	(0.73)
	Colombia	0.5	(0.2)	0.1	1.17	(0.78)	0.0	0.17	(1.68)
	Croatia	c	c	c	c	c	c	c	c
	Estonia	c	c	c	c	c	c	c	c
	Hong Kong-China	-11.8	(6.0)	**-9.5**	**-0.62**	(0.26)	**-6.3**	**-0.45**	(0.19)
	Indonesia	c	c	c	c	c	c	c	c
	Israel	1.5	(1.4)	1.2	0.29	(0.23)	1.1	0.27	(0.23)
	Jordan	1.5	(0.8)	0.5	1.17	(0.82)	0.2	0.65	(1.43)
	Kyrgyzstan	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	c	c
	Lithuania	c	c	c	c	c	c	c	c
	Macao-China	**3.7**	(1.1)	3.0	0.93	(0.60)	1.8	0.47	(0.59)
	Montenegro	c	c	c	c	c	c	c	c
	Qatar	2.2	(0.6)	1.7	18.72	(0.11)	0.3	17.52	(0.69)
	Romania	c	c	c	c	c	c	c	c
	Russian Federation	c	c	c	c	c	c	c	c
	Serbia	c	c	c	c	c	c	c	c
	Slovenia	c	c	c	c	c	c	c	c
	Chinese Taipei	**-10.5**	(1.8)	**-9.7**	**-1.02**	(0.16)	**-9.3**	**-1.37**	(0.15)
	Thailand	-0.3	(0.3)	-0.1	-4.00	(7.57)	-0.1	-4.26	(7.32)
	Tunisia	c	c	c	c	c	c	c	c
	Uruguay	4.5	(1.1)	0.5	0.67	(0.49)	-0.3	-0.95	(0.57)

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part1/1]

Table A2.8b Students' socio-economic background in public and private schools

		PISA index of economic, social and cultural status (ESCS)					
		Public schools		Private schools		Difference in the mean index between public schools and private schools	
		Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	w	w	w	w	w	w
	Austria	0.18	(0.02)	0.32	(0.16)	-0.14	(0.16)
	Belgium	w	w	w	w	w	w
	Canada	0.34	(0.02)	0.85	(0.06)	**-0.52**	(0.06)
	Czech Republic	0.02	(0.02)	0.15	(0.12)	-0.13	(0.12)
	Denmark	0.23	(0.03)	0.48	(0.06)	**-0.25**	(0.07)
	Finland	0.25	(0.02)	c	c	c	c
	France	w	w	w	w	w	w
	Germany	0.26	(0.03)	0.64	(0.09)	**-0.38**	(0.10)
	Greece	-0.22	(0.03)	1.10	(0.11)	**-1.33**	(0.12)
	Hungary	-0.16	(0.04)	0.35	(0.13)	**-0.51**	(0.14)
	Iceland	0.77	(0.01)	c	c	c	c
	Ireland	-0.24	(0.04)	0.12	(0.04)	**-0.36**	(0.05)
	Italy	-0.08	(0.02)	0.19	(0.16)	-0.27	(0.16)
	Japan	-0.09	(0.02)	0.16	(0.04)	**-0.25**	(0.04)
	Korea	0.02	(0.04)	-0.04	(0.04)	0.06	(0.07)
	Luxembourg	0.11	(0.01)	-0.03	(0.04)	**0.13**	(0.04)
	Mexico	-1.20	(0.04)	0.22	(0.14)	**-1.42**	(0.16)
	Netherlands	0.28	(0.08)	0.24	(0.03)	0.04	(0.09)
	New Zealand	0.07	(0.02)	0.71	(0.09)	**-0.64**	(0.09)
	Norway	0.41	(0.02)	c	c	c	c
	Poland	-0.32	(0.02)	c	c	c	c
	Portugal	-0.67	(0.05)	-0.18	(0.07)	**-0.49**	(0.08)
	Slovak Republic	-0.18	(0.03)	0.19	(0.10)	**-0.36**	(0.10)
	Spain	-0.57	(0.04)	0.16	(0.05)	**-0.73**	(0.06)
	Sweden	0.21	(0.02)	0.51	(0.06)	**-0.30**	(0.06)
	Switzerland	0.06	(0.02)	0.58	(0.09)	**-0.52**	(0.09)
	Turkey	-1.30	(0.04)	c	c	c	c
	United Kingdom	0.15	(0.02)	0.85	(0.09)	**-0.70**	(0.09)
	United States	0.08	(0.04)	0.78	(0.11)	**-0.70**	(0.12)
	OECD average	-0.06	(0.01)	0.38	(0.02)	**-0.44**	(0.02)
Partners	Argentina	-0.98	(0.05)	0.02	(0.10)	**-1.01**	(0.11)
	Azerbaijan	-0.46	(0.03)	c	c	c	c
	Brazil	-1.35	(0.03)	0.36	(0.06)	**-1.71**	(0.07)
	Bulgaria	m	m	m	m	m	m
	Chile	-1.17	(0.08)	-0.33	(0.08)	**-0.83**	(0.11)
	Chinese Taipei	-0.31	(0.03)	-0.32	(0.06)	0.01	(0.07)
	Colombia	-1.21	(0.07)	-0.05	(0.15)	**-1.15**	(0.17)
	Croatia	-0.12	(0.01)	c	c	c	c
	Estonia	0.13	(0.02)	c	c	c	c
	Hong Kong-China	-0.46	(0.17)	-0.69	(0.03)	0.23	(0.18)
	Indonesia	-1.41	(0.06)	-1.68	(0.07)	**0.27**	(0.09)
	Israel	0.19	(0.03)	0.27	(0.06)	-0.08	(0.08)
	Jordan	-0.71	(0.04)	-0.03	(0.06)	**-0.68**	(0.07)
	Kyrgyzstan	-0.68	(0.02)	c	c	c	c
	Latvia	-0.02	(0.02)	c	c	c	c
	Liechtenstein	0.17	(0.05)	c	c	c	c
	Lithuania	0.03	(0.02)	c	c	c	c
	Macao-China	-1.50	(0.05)	-0.89	(0.01)	**-0.62**	(0.04)
	Montenegro	0.00	(0.01)	c	c	c	c
	Qatar	0.11	(0.01)	0.65	(0.02)	**-0.54**	(0.02)
	Romania	-0.37	(0.04)	c	c	c	c
	Russian Federation	-0.10	(0.03)	c	c	c	c
	Serbia	-0.13	(0.03)	c	c	c	c
	Slovenia	0.12	(0.01)	c	c	c	c
	Thailand	-1.49	(0.03)	-1.15	(0.11)	**-0.33**	(0.12)
	Tunisia	-1.20	(0.07)	c	c	c	c
	Uruguay	-0.74	(0.03)	0.77	(0.05)	**-1.50**	(0.06)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/2]

Table A2.9 Percentage of students by performance group, by schools' use of selecting students by their academic record

		Percentage of students in schools where:						Students in schools where student's academic record is "prerequisite" for admittance to school							
		Student's academic record is "prerequisite" for admittance to school		Student's academic record is "high priority" or "considered" for admittance to school		Student's academic record is "not considered" for admittance to school		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	2.3	(1.0)	49.1	(3.0)	47.2	(3.1)	c	c	c	c	c	c	c	c
	Austria	48.2	(3.4)	25.3	(3.7)	24.7	(1.6)	6.4	(1.3)	46.7	(2.3)	31.7	(1.9)	15.3	(1.5)
	Belgium	12.0	(1.8)	46.4	(3.0)	39.0	(3.0)	20.2	(3.7)	45.2	(4.0)	24.1	(3.7)	10.5	(2.3)
	Canada	5.0	(0.9)	35.1	(2.4)	54.9	(2.1)	1.8	(0.8)	33.1	(3.7)	37.4	(2.4)	27.7	(3.7)
	Czech Republic	35.5	(2.2)	27.1	(2.9)	34.3	(2.4)	7.7	(2.3)	42.3	(2.8)	29.9	(2.1)	20.1	(2.5)
	Denmark	0.7	(0.6)	16.4	(2.6)	63.9	(3.2)	c	c	c	c	c	c	c	c
	Finland	2.9	(1.6)	9.9	(2.5)	85.9	(2.9)	c	c	c	c	c	c	c	c
	France	w	w	w	w	w	w	w	w	w	w	w	w	w	w
	Germany	20.3	(2.8)	42.4	(3.4)	30.3	(3.4)	8.9	(2.7)	39.8	(3.5)	32.1	(2.4)	19.3	(2.7)
	Greece	1.1	(0.8)	13.6	(2.9)	81.8	(3.1)	c	c	c	c	c	c	c	c
	Hungary	31.1	(3.7)	57.6	(4.2)	7.3	(1.5)	4.7	(1.5)	52.7	(3.1)	30.9	(2.6)	11.7	(1.9)
	Iceland	a	a	11.5	(0.1)	82.2	(0.2)	c	c	c	c	c	c	c	c
	Ireland	0.7	(0.6)	15.4	(2.9)	80.8	(3.3)	c	c	c	c	c	c	c	c
	Italy	4.0	(1.3)	29.6	(2.6)	61.3	(2.8)	34.1	(7.9)	54.6	(6.5)	9.2	(1.9)	2.1	(1.1)
	Japan	68.9	(3.3)	29.1	(3.2)	1.2	(0.7)	10.2	(1.3)	45.1	(1.6)	28.7	(1.5)	16.0	(1.2)
	Korea	44.2	(4.1)	25.0	(3.7)	28.5	(3.4)	11.4	(1.9)	52.5	(2.7)	24.1	(1.7)	12.0	(2.0)
	Luxembourg	27.7	(0.0)	58.2	(0.1)	14.2	(0.0)	24.2	(1.3)	55.4	(1.5)	16.0	(1.1)	4.3	(0.6)
	Mexico	18.1	(2.3)	45.9	(2.3)	32.1	(2.4)	39.1	(4.9)	55.7	(4.3)	4.9	(0.9)	0.3	(0.1)
	Netherlands	32.2	(3.5)	58.2	(4.2)	9.2	(2.5)	11.6	(1.6)	41.0	(3.5)	29.2	(2.6)	18.2	(2.0)
	New Zealand	1.1	(0.8)	32.9	(2.8)	61.8	(3.2)	c	c	c	c	c	c	c	c
	Norway	a	a	1.0	(0.7)	92.9	(1.8)	c	c	c	c	c	c	c	c
	Poland	4.5	(1.6)	49.1	(3.5)	45.8	(3.5)	12.0	(3.0)	54.9	(4.0)	22.9	(3.5)	10.3	(3.0)
	Portugal	4.1	(1.4)	18.9	(3.3)	74.5	(3.5)	39.2	(12.9)	45.4	(9.0)	12.3	(4.2)	3.1	(1.4)
	Slovak Republic	35.3	(3.1)	38.0	(3.5)	25.0	(2.7)	12.2	(2.5)	53.5	(2.5)	24.3	(2.1)	10.0	(1.2)
	Spain	1.2	(0.8)	8.8	(1.9)	88.9	(2.3)	c	c	c	c	c	c	c	c
	Sweden	1.8	(0.7)	2.2	(1.0)	94.2	(1.5)	c	c	c	c	c	c	c	c
	Switzerland	38.4	(2.4)	26.3	(2.9)	32.0	(2.4)	12.7	(1.7)	41.6	(2.0)	28.7	(1.9)	16.9	(1.4)
	Turkey	19.7	(2.9)	35.0	(3.6)	45.4	(3.4)	18.6	(4.3)	55.0	(4.4)	22.1	(4.7)	4.2	(1.6)
	United Kingdom	6.7	(0.9)	9.4	(1.8)	75.0	(2.4)	0.9	(0.7)	18.2	(2.1)	33.8	(2.5)	47.1	(3.0)
	United States	2.4	(1.1)	25.4	(3.5)	70.2	(3.7)	c	c	c	c	c	c	c	c
	OECD average	17.4	(0.4)	29.1	(0.5)	51.2	(0.5)	15.3	(1.0)	46.3	(0.9)	24.6	(0.6)	13.8	(0.5)
Partners	Argentina	3.6	(1.4)	39.2	(4.4)	55.3	(4.2)	42.7	(8.3)	50.7	(5.8)	6.0	(3.5)	1.0	(0.7)
	Azerbaijan	13.0	(2.6)	47.5	(3.7)	32.6	(4.1)	62.7	(5.7)	36.2	(5.3)	1.1	(0.6)	a	a
	Brazil	3.9	(1.2)	14.4	(2.1)	78.9	(2.4)	33.8	(9.1)	48.3	(8.0)	12.8	(4.4)	5.1	(3.7)
	Bulgaria	59.7	(3.6)	28.9	(3.6)	9.6	(2.0)	31.9	(3.3)	49.0	(2.1)	14.4	(1.7)	4.6	(1.1)
	Chile	18.8	(3.4)	50.3	(4.4)	28.3	(4.0)	27.4	(4.3)	58.7	(2.7)	11.5	(2.4)	2.5	(1.0)
	Colombia	9.2	(2.3)	61.5	(5.0)	27.0	(4.0)	43.3	(4.1)	51.6	(3.9)	4.4	(1.6)	0.6	(0.5)
	Croatia	85.5	(2.1)	13.7	(2.0)	0.8	(0.5)	14.7	(0.9)	60.4	(1.0)	19.2	(1.0)	5.7	(0.5)
	Estonia	29.3	(2.8)	58.0	(3.2)	12.7	(2.0)	6.2	(0.9)	51.4	(2.2)	28.6	(1.6)	13.8	(1.8)
	Hong Kong-China	44.2	(4.6)	55.8	(4.6)	a	a	4.3	(0.9)	43.1	(2.7)	33.8	(1.9)	18.7	(2.1)
	Indonesia	23.3	(4.7)	61.4	(4.5)	12.8	(2.1)	45.9	(7.9)	51.3	(6.6)	2.9	(1.7)	3.4	(0.3)
	Israel	9.5	(2.3)	57.3	(4.0)	25.2	(3.5)	17.7	(4.3)	56.1	(3.6)	18.6	(2.7)	7.6	(1.8)
	Jordan	14.9	(3.0)	46.7	(4.2)	38.3	(3.8)	35.6	(4.9)	54.2	(3.8)	9.0	(2.8)	1.1	(0.8)
	Kyrgyzstan	14.4	(2.4)	57.6	(3.7)	24.6	(3.0)	88.9	(2.9)	10.8	(2.8)	0.3	(0.2)	a	a
	Latvia	4.9	(1.5)	56.7	(3.5)	37.3	(3.3)	5.5	(1.8)	66.2	(4.3)	23.5	(5.1)	4.7	(2.1)
	Liechtenstein	78.1	(0.8)	9.2	(0.6)	12.6	(0.6)	9.9	(1.9)	46.1	(3.5)	28.3	(2.8)	15.6	(2.3)
	Lithuania	3.3	(1.4)	29.3	(3.5)	67.4	(3.3)	4.1	(3.8)	36.0	(7.6)	37.1	(5.7)	22.7	(6.5)
	Macao-China	42.2	(0.1)	56.4	(0.1)	1.4	(0.0)	8.9	(1.1)	61.0	(1.8)	24.3	(1.5)	5.9	(0.6)
	Montenegro	11.3	(0.1)	81.1	(0.2)	7.6	(0.2)	24.8	(1.6)	59.8	(2.7)	14.3	(2.3)	1.2	(0.7)
	Qatar	24.5	(0.1)	36.0	(0.1)	23.4	(0.1)	69.8	(1.3)	26.1	(1.4)	3.3	(0.4)	0.8	(0.3)
	Romania	37.9	(4.5)	44.1	(5.4)	16.3	(3.3)	37.8	(3.2)	54.6	(2.1)	6.8	(1.7)	0.8	(0.4)
	Russian Federation	6.4	(1.4)	34.2	(4.0)	57.3	(4.1)	19.9	(5.3)	56.0	(4.6)	17.4	(3.6)	6.7	(3.4)
	Serbia	78.6	(3.1)	17.3	(3.2)	2.4	(1.0)	33.4	(1.9)	57.9	(1.7)	7.7	(0.8)	1.0	(0.2)
	Slovenia	28.2	(0.1)	30.4	(0.3)	39.9	(0.3)	3.3	(0.7)	38.8	(1.9)	31.1	(2.4)	26.8	(1.5)
	Chinese Taipei	34.7	(3.0)	40.0	(3.8)	23.1	(2.7)	3.5	(1.1)	36.5	(2.9)	36.8	(1.9)	23.2	(2.7)
	Thailand	15.8	(2.4)	61.1	(2.9)	23.1	(2.6)	38.6	(4.7)	51.9	(3.6)	8.4	(2.0)	1.1	(0.5)
	Tunisia	14.8	(2.8)	39.9	(4.3)	43.5	(4.2)	59.2	(6.7)	35.5	(4.9)	4.8	(2.4)	0.6	(0.4)
	Uruguay	7.7	(1.6)	14.4	(2.0)	75.5	(2.5)	38.8	(8.0)	47.9	(5.9)	10.4	(3.0)	2.9	(1.4)

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[Part 2/2]

Table A2.9 Percentage of students by performance group, by schools' use of selecting students by their academic record

		Students in schools where student's academic record is "high priority" or "considered" for admittance to school								Students in schools where student's academic record is "not considered" for admittance to school							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	12.9	(0.9)	48.3	(1.0)	24.4	(0.8)	14.4	(1.0)	13.5	(1.0)	48.9	(1.0)	24.5	(0.9)	13.1	(0.9)
	Austria	16.7	(4.3)	48.3	(3.5)	25.4	(2.5)	9.6	(1.5)	34.1	(2.4)	57.7	(2.1)	7.5	(1.1)	0.7	(0.3)
	Belgium	14.5	(1.6)	48.1	(1.8)	26.5	(1.7)	10.9	(1.1)	19.3	(2.4)	50.2	(2.3)	21.8	(1.6)	8.7	(1.1)
	Canada	9.4	(1.0)	49.5	(1.2)	27.4	(1.2)	13.7	(1.0)	10.9	(0.8)	48.1	(1.0)	27.4	(0.9)	13.7	(0.8)
	Czech Republic	16.3	(3.0)	53.6	(2.9)	20.5	(2.3)	9.5	(1.9)	23.5	(1.7)	58.2	(1.5)	14.2	(1.3)	4.0	(0.8)
	Denmark	16.7	(2.8)	53.8	(2.6)	20.9	(2.4)	8.7	(1.8)	19.1	(1.2)	55.8	(1.1)	19.1	(0.9)	6.0	(0.6)
	Finland	6.2	(1.8)	37.4	(3.1)	35.1	(3.1)	21.3	(3.0)	3.9	(0.5)	43.3	(1.2)	32.0	(1.1)	20.7	(0.9)
	France	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
	Germany	13.3	(2.0)	50.0	(1.9)	24.4	(1.8)	12.3	(1.5)	20.9	(3.2)	53.8	(2.6)	18.2	(2.1)	7.1	(1.5)
	Greece	15.2	(3.5)	57.9	(3.1)	20.4	(2.8)	6.5	(1.3)	26.1	(1.6)	58.3	(1.4)	12.8	(0.9)	2.8	(0.3)
	Hungary	14.0	(1.4)	62.6	(1.9)	18.4	(1.7)	4.9	(1.1)	65.5	(4.8)	34.2	(4.9)	1.5	(0.8)		
	Iceland	22.7	(2.0)	54.2	(3.0)	16.9	(3.1)	6.3	(1.4)	20.6	(1.0)	54.1	(1.0)	19.1	(0.8)	6.1	(0.6)
	Ireland	15.0	(2.9)	51.7	(2.6)	23.9	(2.7)	9.4	(1.9)	15.6	(1.3)	54.2	(1.1)	20.9	(0.9)	9.2	(0.8)
	Italy	22.1	(2.4)	55.4	(1.6)	17.0	(1.4)	5.6	(0.8)	26.1	(1.3)	55.2	(1.2)	14.7	(0.9)	4.0	(0.4)
	Japan	15.5	(2.4)	49.0	(2.3)	22.8	(2.2)	12.7	(2.2)	26.4	(17.0)	38.1	(9.1)	25.2	(11.5)	10.4	(7.2)
	Korea	15.7	(3.3)	54.3	(2.7)	23.1	(2.6)	6.9	(1.3)	7.1	(1.0)	52.8	(2.1)	29.6	(2.0)	10.5	(1.5)
	Luxembourg	20.0	(0.6)	52.7	(1.2)	19.9	(0.9)	7.4	(0.6)	26.7	(1.6)	56.2	(2.4)	14.7	(1.4)	2.5	(0.7)
	Mexico	47.0	(2.5)	48.9	(2.2)	3.8	(0.7)	0.4	(0.1)	62.7	(2.4)	35.6	(2.3)	1.6	(0.5)	0.1	(0.1)
	Netherlands	14.0	(1.9)	51.5	(2.0)	24.0	(1.7)	10.5	(1.2)	11.7	(4.3)	50.7	(6.8)	25.3	(5.6)	12.3	(4.5)
	New Zealand	13.8	(1.6)	44.7	(1.9)	23.7	(1.7)	17.9	(1.5)	13.3	(1.0)	44.8	(1.1)	24.2	(1.0)	17.7	(0.9)
	Norway	c	c	c	c	c	c	c	c	21.2	(1.3)	56.0	(1.2)	16.9	(0.7)	6.0	(0.5)
	Poland	15.5	(1.2)	54.7	(1.3)	21.6	(1.3)	8.2	(0.9)	19.1	(1.3)	59.5	(1.5)	16.5	(1.1)	4.9	(0.5)
	Portugal	21.3	(4.6)	58.3	(3.0)	17.1	(2.7)	3.3	(0.8)	24.4	(1.7)	58.0	(1.5)	14.4	(1.0)	3.2	(0.5)
	Slovak Republic	20.9	(2.3)	60.3	(1.8)	15.0	(1.8)	3.8	(0.8)	30.6	(2.7)	54.1	(2.3)	13.0	(1.7)	2.3	(0.5)
	Spain	16.7	(4.2)	54.2	(1.7)	22.3	(3.2)	6.9	(1.5)	20.0	(0.9)	58.3	(0.7)	17.2	(0.8)	4.5	(0.4)
	Sweden	c	c	c	c	c	c	c	c	16.3	(0.8)	55.2	(1.0)	20.7	(0.9)	7.8	(0.5)
	Switzerland	19.3	(2.0)	54.1	(2.0)	20.3	(2.0)	6.3	(1.2)	17.9	(1.4)	56.8	(1.8)	19.5	(1.3)	5.8	(1.7)
	Turkey	55.0	(3.2)	42.5	(2.7)	2.3	(1.1)	0.1	(0.1)	52.1	(2.6)	45.5	(2.3)	2.3	(0.6)	0.1	(0.1)
	United Kingdom	11.8	(2.0)	46.2	(2.5)	22.5	(2.1)	19.5	(2.4)	18.1	(1.0)	50.4	(1.1)	20.8	(0.8)	10.8	(0.7)
	United States	22.8	(3.0)	48.3	(2.5)	19.1	(2.2)	9.8	(1.5)	25.0	(2.0)	48.6	(1.5)	18.0	(1.0)	8.5	(0.8)
	OECD average	18.7	(0.5)	51.5	(0.4)	20.7	(0.4)	9.1	(0.3)	23.7	(0.4)	51.9	(0.4)	17.4	(0.3)	7.2	(0.2)
Partners	Argentina	42.2	(4.9)	50.0	(4.0)	6.9	(1.4)	0.9	(0.3)	66.2	(2.7)	31.6	(2.5)	2.1	(0.5)	0.2	(0.1)
	Azerbaijan	69.2	(3.1)	30.3	(3.0)	0.5	(0.3)	0.0	(0.0)	77.0	(3.5)	23.0	(3.5)	0.1	(0.1)	a	a
	Brazil	53.8	(5.2)	37.1	(4.2)	8.2	(2.0)	1.0	(0.5)	63.9	(1.5)	33.6	(1.4)	2.1	(0.3)	0.3	(0.2)
	Bulgaria	57.8	(4.7)	37.0	(3.8)	4.5	(1.2)	0.8	(0.4)	61.7	(5.5)	34.6	(4.2)	3.4	(1.8)	0.4	(0.4)
	Chile	32.3	(2.4)	54.1	(1.9)	10.9	(1.5)	2.7	(0.6)	61.0	(3.4)	36.7	(2.8)	2.1	(1.3)	0.3	(0.4)
	Colombia	60.8	(2.6)	37.2	(2.6)	1.9	(0.5)	0.1	(0.1)	63.0	(3.2)	35.8	(3.1)	1.2	(0.4)	0.1	(0.1)
	Croatia	28.1	(3.6)	61.6	(2.9)	8.9	(1.8)	1.5	(0.8)	c	c	c	c	c	c	c	c
	Estonia	8.2	(1.0)	54.7	(1.3)	26.2	(1.2)	10.9	(0.8)	8.6	(2.2)	62.3	(4.6)	20.6	(3.7)	8.6	(1.9)
	Hong Kong-China	12.2	(1.6)	47.6	(1.9)	26.4	(1.6)	13.7	(1.5)	c	c	c	c	c	c	c	c
	Indonesia	64.8	(2.9)	34.3	(2.8)	0.8	(0.4)	0.1	(0.0)	75.0	(3.8)	23.5	(2.9)	1.5	(1.4)	a	a
	Israel	36.6	(2.2)	43.3	(1.6)	14.6	(1.3)	5.6	(0.8)	44.0	(3.5)	42.7	(2.3)	10.1	(1.5)	3.1	(0.8)
	Jordan	43.0	(2.2)	50.2	(1.9)	6.0	(0.8)	0.7	(0.3)	49.3	(2.2)	46.8	(2.0)	3.7	(0.8)	0.3	(0.2)
	Kyrgyzstan	86.7	(1.6)	12.6	(1.4)	0.7	(0.2)	0.0	(0.0)	85.4	(2.8)	13.8	(2.5)	0.8	(0.5)	0.1	(0.1)
	Latvia	14.2	(1.1)	63.1	(1.4)	18.0	(1.1)	4.7	(0.6)	23.8	(2.6)	59.6	(2.2)	13.6	(1.8)	2.9	(0.7)
	Liechtenstein	15.3	(8.7)	68.0	(12.9)	16.7	(9.2)	a	a	29.8	(8.2)	58.1	(10.3)	12.1	(5.6)	a	a
	Lithuania	14.9	(2.3)	54.7	(2.6)	22.5	(2.3)	7.8	(1.8)	23.5	(1.4)	59.3	(1.2)	14.3	(1.0)	2.9	(0.5)
	Macao-China	10.7	(0.6)	62.2	(0.9)	22.1	(0.8)	5.0	(0.5)	c	c	c	c	c	c	c	c
	Montenegro	53.6	(1.0)	44.0	(1.1)	2.2	(0.3)	0.2	(0.1)	51.4	(3.8)	45.6	(4.1)	2.9	(1.4)	0.7	(0.7)
	Qatar	78.8	(0.7)	18.9	(0.8)	1.9	(0.3)	0.3	(0.2)	84.2	(1.0)	15.2	(1.0)	0.6	(0.2)	a	a
	Romania	47.2	(4.3)	49.8	(4.2)	2.8	(0.8)	0.2	(0.2)	63.5	(6.7)	33.6	(5.9)	2.6	(1.3)	0.3	(0.2)
	Russian Federation	21.3	(2.6)	57.5	(2.2)	16.6	(1.8)	4.6	(1.0)	22.7	(1.4)	59.4	(1.2)	14.2	(1.1)	3.7	(0.5)
	Serbia	56.8	(4.6)	40.5	(4.3)	2.6	(0.9)	0.2	(0.2)	c	c	c	c	c	c	c	c
	Slovenia	13.1	(1.3)	50.9	(1.8)	24.3	(1.5)	11.8	(0.8)	21.4	(1.3)	58.6	(1.6)	15.6	(0.9)	4.4	(0.6)
	Chinese Taipei	16.5	(2.2)	50.0	(2.4)	23.3	(2.1)	10.2	(1.9)	15.4	(2.2)	52.1	(2.1)	22.7	(1.9)	9.9	(1.3)
	Thailand	45.2	(1.7)	50.9	(1.5)	3.6	(0.5)	0.3	(0.1)	53.6	(2.5)	44.3	(2.3)	1.9	(0.7)	0.1	(0.1)
	Tunisia	60.8	(3.2)	37.3	(2.9)	1.9	(0.7)	0.1	(0.1)	66.3	(3.0)	32.6	(2.9)	1.1	(0.4)	0.1	(0.1)
	Uruguay	32.3	(4.9)	53.3	(4.0)	11.5	(2.1)	2.9	(0.8)	44.2	(1.7)	49.0	(1.5)	5.8	(0.6)	1.0	(0.3)

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[Part 1/1]

Table A3.1a Regular science lessons in school, by performance group

		Percentage of students taking regular lessons in science in school								Hours per week taking science lessons in school									
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in hours between strong performers and top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.
OECD	Australia	76.0	(1.6)	82.7	(0.8)	90.5	(0.8)	95.6	(0.7)	2.26	(0.06)	2.98	(0.04)	3.67	(0.04)	4.18	(0.05)	**-0.52**	(0.06)
	Austria	69.3	(2.4)	79.8	(1.1)	91.7	(1.3)	96.4	(1.2)	1.44	(0.06)	2.18	(0.05)	3.14	(0.09)	3.82	(0.14)	**-0.61**	(0.13)
	Belgium	61.6	(2.7)	81.9	(1.0)	97.3	(0.5)	99.1	(0.4)	1.43	(0.07)	2.29	(0.06)	3.36	(0.06)	3.97	(0.07)	**-0.58**	(0.10)
	Canada	80.4	(1.5)	89.0	(0.5)	94.0	(0.7)	96.4	(0.6)	2.70	(0.09)	3.71	(0.04)	4.45	(0.06)	4.86	(0.07)	**-0.46**	(0.09)
	Czech Republic	82.4	(2.2)	86.7	(1.2)	93.2	(1.4)	97.3	(1.3)	1.88	(0.07)	2.36	(0.06)	3.77	(0.10)	4.93	(0.11)	**-1.18**	(0.13)
	Denmark	91.0	(1.7)	97.1	(0.7)	99.0	(0.5)	99.7	(0.4)	2.59	(0.09)	3.23	(0.04)	3.51	(0.06)	3.76	(0.11)	**-0.23**	(0.11)
	Finland	85.4	(3.0)	95.3	(0.6)	98.0	(0.5)	99.1	(0.3)	2.21	(0.11)	2.75	(0.05)	3.28	(0.05)	3.80	(0.06)	**-0.49**	(0.08)
	France	79.5	(1.8)	93.3	(0.8)	98.7	(0.4)	99.8	(0.5)	1.46	(0.05)	2.56	(0.05)	4.02	(0.08)	4.82	(0.09)	**-0.87**	(0.14)
	Germany	77.4	(2.5)	89.4	(0.9)	96.3	(0.9)	98.2	(0.8)	1.85	(0.08)	2.72	(0.06)	3.69	(0.07)	4.48	(0.10)	**-0.74**	(0.12)
	Greece	76.6	(1.4)	94.5	(0.6)	99.5	(0.3)	100.0	(0.0)	1.99	(0.07)	3.30	(0.04)	4.23	(0.07)	4.77	(0.15)	**-0.56**	(0.19)
	Hungary	86.4	(1.7)	89.1	(1.1)	91.9	(1.5)	94.4	(2.1)	1.80	(0.06)	2.28	(0.04)	3.13	(0.09)	3.92	(0.14)	**-0.82**	(0.19)
	Iceland	90.8	(1.1)	97.3	(0.4)	98.7	(0.6)	98.6	(0.9)	2.54	(0.07)	2.98	(0.03)	3.27	(0.05)	3.37	(0.10)	-0.13	(0.14)
	Ireland	69.6	(3.1)	84.8	(1.2)	92.7	(1.1)	95.9	(1.4)	2.07	(0.11)	2.45	(0.05)	2.80	(0.05)	3.15	(0.08)	**-0.28**	(0.11)
	Italy	84.3	(0.9)	90.5	(1.2)	90.8	(2.1)	88.6	(3.5)	2.21	(0.06)	2.98	(0.07)	3.57	(0.09)	3.64	(0.18)	-0.15	(0.14)
	Japan	91.8	(2.3)	95.3	(1.6)	97.7	(0.9)	99.2	(0.5)	2.09	(0.08)	2.57	(0.06)	2.88	(0.07)	3.23	(0.08)	**-0.32**	(0.07)
	Korea	90.7	(2.6)	96.3	(1.5)	98.6	(0.6)	99.3	(0.5)	2.82	(0.10)	3.52	(0.06)	3.87	(0.09)	4.03	(0.23)	-0.09	(0.18)
	Luxembourg	80.6	(1.7)	89.0	(0.7)	95.4	(0.9)	98.7	(1.0)	1.65	(0.05)	2.30	(0.04)	2.93	(0.07)	3.17	(0.11)	-0.30	(0.16)
	Mexico	87.2	(0.7)	84.1	(0.6)	87.0	(2.7)	c	c	3.03	(0.06)	3.24	(0.05)	3.76	(0.15)	c	c	c	c
	Netherlands	61.7	(3.5)	71.5	(1.3)	85.0	(1.2)	91.9	(1.5)	1.29	(0.12)	1.70	(0.04)	2.72	(0.06)	3.58	(0.12)	**-0.86**	(0.13)
	New Zealand	76.4	(2.7)	89.8	(0.9)	96.0	(0.7)	97.9	(0.6)	2.42	(0.11)	3.89	(0.05)	4.49	(0.05)	5.01	(0.05)	**-0.48**	(0.08)
	Norway	92.4	(1.1)	97.8	(0.4)	99.5	(0.3)	99.6	(0.7)	2.34	(0.05)	2.66	(0.03)	2.82	(0.04)	2.88	(0.05)	-0.02	(0.07)
	Poland	94.1	(0.9)	96.9	(0.4)	99.2	(0.4)	98.7	(0.7)	2.09	(0.05)	2.63	(0.04)	3.24	(0.06)	3.55	(0.09)	**-0.29**	(0.12)
	Portugal	90.0	(1.2)	85.4	(0.9)	86.7	(1.7)	94.1	(2.2)	2.14	(0.05)	3.18	(0.06)	4.55	(0.09)	5.53	(0.15)	**-1.00**	(0.21)
	Slovak Republic	76.4	(1.9)	89.4	(1.1)	96.6	(1.1)	99.6	(0.4)	1.32	(0.06)	2.24	(0.08)	3.59	(0.13)	4.69	(0.14)	**-1.03**	(0.22)
	Spain	86.5	(1.1)	89.0	(0.6)	95.0	(0.7)	97.6	(0.9)	2.26	(0.06)	2.94	(0.04)	4.08	(0.06)	4.86	(0.11)	**-0.83**	(0.16)
	Sweden	90.7	(1.7)	98.1	(0.4)	98.5	(0.7)	99.1	(0.7)	2.35	(0.07)	2.82	(0.03)	2.98	(0.04)	3.11	(0.06)	-0.10	(0.08)
	Switzerland	70.0	(1.7)	85.0	(0.9)	93.5	(0.9)	98.4	(0.7)	1.40	(0.05)	2.05	(0.03)	2.96	(0.06)	3.95	(0.10)	**-1.00**	(0.13)
	Turkey	85.2	(1.1)	96.0	(0.7)	97.8	(2.3)	c	c	1.95	(0.07)	3.31	(0.10)	5.57	(0.14)	c	c	c	c
	United Kingdom	90.7	(1.0)	97.3	(0.5)	99.1	(0.3)	99.4	(0.2)	3.12	(0.08)	4.14	(0.04)	4.69	(0.04)	5.20	(0.06)	**-0.49**	(0.08)
	United States	85.0	(1.1)	93.1	(0.6)	96.3	(1.0)	97.1	(1.1)	2.30	(0.08)	3.54	(0.05)	4.31	(0.06)	4.74	(0.09)	**-0.35**	(0.13)
	OECD average	81.7	(0.4)	90.2	(0.2)	95.3	(0.2)	97.5	(0.2)	2.07	(0.01)	2.82	(0.01)	3.57	(0.01)	4.11	(0.02)	**-0.53**	(0.03)
Partners	Argentina	80.4	(1.4)	90.7	(1.0)	96.8	(1.6)	c	c	1.84	(0.05)	2.61	(0.06)	3.94	(0.23)	c	c	c	c
	Azerbaijan	88.6	(0.8)	96.2	(1.0)	c	c	c	c	2.61	(0.07)	3.37	(0.08)	c	c	c	c	c	c
	Brazil	88.6	(0.7)	96.3	(0.5)	99.4	(0.7)	c	c	1.84	(0.03)	2.58	(0.04)	4.13	(0.13)	c	c	c	c
	Bulgaria	76.2	(1.4)	91.5	(0.7)	97.3	(1.0)	97.5	(1.5)	1.84	(0.06)	2.95	(0.07)	3.68	(0.13)	4.25	(0.22)	-0.42	(0.22)
	Chile	76.2	(1.3)	88.5	(1.0)	96.7	(0.9)	c	c	1.66	(0.04)	2.53	(0.06)	3.77	(0.13)	c	c	c	c
	Colombia	94.0	(0.6)	95.8	(0.8)	c	c	c	c	3.23	(0.10)	3.86	(0.14)	c	c	c	c	c	c
	Croatia	53.8	(2.6)	75.3	(1.4)	91.5	(1.1)	95.1	(1.7)	1.31	(0.07)	1.96	(0.05)	2.62	(0.07)	2.77	(0.14)	-0.21	(0.18)
	Estonia	87.5	(2.1)	96.8	(0.4)	98.9	(0.5)	99.3	(0.4)	2.14	(0.11)	2.93	(0.05)	3.74	(0.06)	4.54	(0.10)	**-0.83**	(0.11)
	Hong Kong-China	61.8	(3.4)	59.8	(1.5)	71.7	(1.6)	82.8	(1.8)	1.65	(0.15)	2.35	(0.06)	3.81	(0.10)	4.90	(0.11)	**-1.20**	(0.16)
	Indonesia	93.4	(0.8)	95.0	(1.1)	c	c	c	c	2.78	(0.05)	3.90	(0.10)	c	c	c	c	c	c
	Israel	64.4	(1.9)	78.8	(1.5)	85.9	(2.4)	91.1	(3.0)	1.71	(0.07)	2.45	(0.07)	3.31	(0.12)	4.11	(0.15)	**-0.69**	(0.21)
	Jordan	83.3	(1.2)	93.9	(0.7)	98.0	(1.4)	c	c	2.51	(0.07)	3.67	(0.05)	4.70	(0.15)	c	c	c	c
	Kyrgyzstan	74.7	(0.9)	91.6	(1.2)	c	c	c	c	1.91	(0.07)	3.01	(0.09)	c	c	c	c	c	c
	Latvia	85.3	(1.9)	94.0	(0.6)	97.6	(0.8)	97.9	(1.5)	2.09	(0.08)	2.78	(0.06)	3.63	(0.09)	4.07	(0.21)	**-0.62**	(0.29)
	Liechtenstein	82.7	(6.2)	93.6	(1.9)	100.0	(0.0)	100.0	(0.0)	2.04	(0.20)	2.18	(0.11)	2.81	(0.17)	4.15	(0.27)	**-1.21**	(0.44)
	Lithuania	90.5	(1.3)	96.9	(0.4)	99.3	(0.4)	99.9	(0.2)	1.91	(0.07)	2.70	(0.05)	3.26	(0.07)	3.70	(0.10)	**-0.42**	(0.16)
	Macao-China	81.9	(2.1)	88.8	(0.5)	90.4	(1.0)	93.0	(1.9)	2.25	(0.10)	3.55	(0.05)	4.59	(0.07)	5.27	(0.14)	**-0.62**	(0.26)
	Montenegro	83.3	(0.8)	94.2	(0.7)	98.8	(1.0)	c	c	2.26	(0.05)	3.26	(0.05)	4.48	(0.17)	c	c	c	c
	Qatar	80.2	(0.6)	94.0	(0.9)	c	c	c	c	2.25	(0.04)	3.97	(0.06)	c	c	c	c	c	c
	Romania	73.6	(1.6)	89.5	(0.8)	97.9	(1.0)	c	c	1.73	(0.08)	2.58	(0.06)	4.17	(0.17)	c	c	c	c
	Russian Federation	87.9	(1.5)	93.8	(0.6)	97.6	(0.7)	99.3	(0.7)	2.77	(0.12)	3.75	(0.07)	4.60	(0.10)	5.28	(0.12)	**-0.49**	(0.21)
	Serbia	78.4	(1.2)	92.3	(0.8)	98.6	(0.8)	c	c	2.05	(0.06)	3.20	(0.06)	4.43	(0.10)	c	c	c	c
	Slovenia	79.2	(1.9)	89.1	(0.9)	96.1	(1.0)	98.4	(0.9)	1.65	(0.07)	2.43	(0.04)	3.43	(0.07)	4.40	(0.09)	**-0.88**	(0.15)
	Chinese Taipei	70.6	(2.4)	86.1	(1.1)	94.2	(1.2)	97.8	(0.8)	1.49	(0.07)	2.60	(0.06)	3.43	(0.07)	3.79	(0.06)	**-0.36**	(0.09)
	Thailand	100.0	(0.0)	100.0	(0.0)	100.0	(0.0)	c	c	3.25	(0.04)	4.14	(0.05)	5.81	(0.13)	c	c	c	c
	Tunisia	67.5	(1.6)	75.1	(1.6)	c	c	c	c	2.17	(0.05)	3.26	(0.06)	c	c	c	c	c	c
	Uruguay	76.6	(1.7)	87.3	(1.1)	92.7	(1.8)	c	c	1.89	(0.06)	2.54	(0.06)	3.59	(0.13)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A3.1b Out-of-school lessons in science, by performance group

		Percentage of students taking out-of school-time lessons in science								Hours per week taking out-of-school lessons in science									
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in hours between strong performers and top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.
OECD	Australia	28.6	(1.2)	23.8	(0.8)	21.9	(1.0)	17.8	(1.1)	0.50	(0.03)	0.36	(0.02)	0.34	(0.02)	0.26	(0.02)	**0.07**	(0.03)
	Austria	25.4	(2.2)	12.6	(0.8)	4.7	(0.8)	3.8	(1.2)	0.52	(0.06)	0.22	(0.02)	0.07	(0.02)	0.05	(0.02)	0.01	(0.03)
	Belgium	24.9	(1.7)	22.2	(0.8)	14.4	(0.9)	9.1	(1.2)	0.51	(0.06)	0.36	(0.02)	0.21	(0.02)	0.14	(0.02)	**0.08**	(0.03)
	Canada	42.9	(2.0)	37.0	(0.9)	30.3	(1.2)	23.3	(1.6)	0.79	(0.05)	0.60	(0.02)	0.50	(0.03)	0.36	(0.03)	**0.14**	(0.04)
	Czech Republic	35.5	(2.9)	31.1	(1.4)	32.4	(1.8)	33.1	(2.3)	0.69	(0.07)	0.51	(0.03)	0.53	(0.04)	0.51	(0.05)	0.02	(0.06)
	Denmark	51.3	(2.9)	54.2	(1.3)	53.8	(2.1)	48.9	(4.4)	0.77	(0.06)	0.78	(0.03)	0.78	(0.04)	0.72	(0.08)	0.06	(0.09)
	Finland	39.3	(4.3)	28.2	(1.2)	20.5	(1.6)	13.7	(1.7)	0.74	(0.11)	0.39	(0.02)	0.27	(0.03)	0.19	(0.03)	0.08	(0.05)
	France	38.2	(2.1)	41.6	(1.1)	32.6	(2.0)	21.7	(3.3)	0.61	(0.04)	0.58	(0.02)	0.51	(0.04)	0.34	(0.06)	**0.17**	(0.08)
	Germany	46.9	(2.4)	33.0	(1.2)	20.6	(1.6)	15.7	(1.7)	0.90	(0.07)	0.58	(0.03)	0.32	(0.03)	0.22	(0.03)	**0.11**	(0.04)
	Greece	65.5	(1.9)	74.9	(1.1)	77.3	(2.1)	75.2	(4.8)	1.51	(0.07)	2.05	(0.05)	2.41	(0.10)	2.52	(0.25)	-0.11	(0.26)
	Hungary	63.1	(2.5)	55.4	(1.3)	49.8	(2.3)	52.6	(3.6)	1.19	(0.07)	0.99	(0.03)	0.91	(0.05)	1.00	(0.08)	-0.09	(0.09)
	Iceland	26.8	(1.9)	18.0	(1.0)	14.5	(1.5)	9.2	(2.2)	0.49	(0.04)	0.27	(0.02)	0.20	(0.03)	0.13	(0.03)	0.08	(0.04)
	Ireland	25.9	(2.3)	23.6	(1.0)	15.6	(1.3)	11.3	(2.2)	0.43	(0.05)	0.35	(0.02)	0.22	(0.02)	0.17	(0.04)	0.05	(0.05)
	Italy	39.6	(1.1)	29.5	(0.8)	20.7	(1.4)	17.9	(2.8)	0.79	(0.03)	0.57	(0.02)	0.36	(0.03)	0.32	(0.06)	0.04	(0.08)
	Japan	26.2	(2.1)	18.3	(0.9)	15.4	(1.2)	12.8	(1.5)	0.49	(0.05)	0.27	(0.02)	0.20	(0.02)	0.15	(0.02)	0.05	(0.03)
	Korea	28.9	(2.1)	48.1	(1.7)	59.3	(2.6)	59.1	(4.6)	0.56	(0.06)	0.92	(0.04)	1.29	(0.07)	1.39	(0.18)	-0.10	(0.16)
	Luxembourg	43.7	(1.6)	29.4	(1.0)	18.0	(1.6)	14.0	(2.5)	0.82	(0.04)	0.50	(0.02)	0.26	(0.03)	0.22	(0.05)	0.04	(0.06)
	Mexico	56.4	(1.2)	44.8	(1.1)	31.3	(3.2)	c	c	1.20	(0.04)	0.84	(0.03)	0.61	(0.09)	c	c	c	c
	Netherlands	40.8	(2.9)	38.7	(1.4)	29.4	(1.6)	19.3	(2.3)	0.74	(0.06)	0.61	(0.03)	0.46	(0.03)	0.25	(0.03)	**0.20**	(0.05)
	New Zealand	33.3	(2.7)	27.7	(1.2)	21.8	(1.6)	19.3	(1.7)	0.63	(0.07)	0.42	(0.02)	0.34	(0.03)	0.29	(0.03)	0.05	(0.04)
	Norway	66.1	(2.0)	62.7	(1.3)	52.8	(2.2)	47.3	(3.6)	1.16	(0.05)	0.95	(0.03)	0.71	(0.04)	0.67	(0.08)	0.04	(0.08)
	Poland	47.8	(2.2)	39.2	(1.3)	37.7	(1.9)	40.2	(2.9)	0.82	(0.05)	0.59	(0.03)	0.55	(0.04)	0.66	(0.07)	-0.11	(0.09)
	Portugal	42.7	(1.9)	31.7	(1.1)	26.7	(2.2)	21.3	(3.9)	0.79	(0.05)	0.60	(0.02)	0.57	(0.05)	0.47	(0.11)	0.10	(0.12)
	Slovak Republic	29.6	(2.3)	37.0	(1.6)	50.1	(2.7)	50.4	(2.8)	0.45	(0.04)	0.61	(0.04)	0.89	(0.06)	0.92	(0.09)	-0.03	(0.10)
	Spain	41.1	(1.9)	30.3	(1.0)	21.5	(1.5)	13.9	(2.3)	0.92	(0.06)	0.70	(0.03)	0.47	(0.05)	0.28	(0.06)	**0.19**	(0.07)
	Sweden	48.3	(2.1)	38.7	(1.1)	25.5	(1.9)	16.7	(2.8)	0.83	(0.06)	0.52	(0.02)	0.33	(0.03)	0.20	(0.04)	**0.13**	(0.04)
	Switzerland	36.7	(1.7)	23.4	(0.9)	21.0	(1.4)	16.4	(1.8)	0.67	(0.04)	0.36	(0.02)	0.32	(0.02)	0.28	(0.05)	0.04	(0.06)
	Turkey	77.6	(1.0)	84.8	(1.1)	75.4	(5.6)	c	c	0.96	(0.05)	1.49	(0.07)	2.90	(0.18)	c	c	c	c
	United Kingdom	34.2	(1.8)	35.5	(1.2)	29.8	(1.5)	24.2	(1.9)	0.58	(0.04)	0.52	(0.02)	0.42	(0.03)	0.33	(0.03)	0.08	(0.04)
	United States	49.9	(1.8)	45.8	(1.2)	39.1	(2.2)	29.8	(2.6)	1.01	(0.05)	0.78	(0.03)	0.66	(0.06)	0.47	(0.06)	0.18	(0.10)
	OECD average	40.1	(0.4)	35.4	(0.2)	30.6	(0.3)	26.4	(0.5)	0.75	(0.01)	0.61	(0.00)	0.54	(0.01)	0.48	(0.01)	**0.06**	(0.02)
Partners	Argentina	34.2	(1.5)	19.6	(1.1)	14.5	(4.4)	c	c	0.60	(0.03)	0.36	(0.02)	0.24	(0.09)	c	c	c	c
	Azerbaijan	61.0	(1.4)	61.1	(2.1)	c	c	c	c	1.34	(0.04)	1.42	(0.08)	c	c	c	c	c	c
	Bulgaria	55.7	(1.5)	46.6	(1.2)	42.4	(2.3)	43.2	(4.9)	1.12	(0.04)	0.92	(0.04)	0.83	(0.07)	0.69	(0.12)	0.13	(0.13)
	Brazil	43.7	(1.1)	47.3	(1.7)	57.1	(4.9)	c	c	0.77	(0.03)	0.80	(0.04)	1.09	(0.15)	c	c	c	c
	Chile	52.5	(1.4)	47.7	(1.3)	44.1	(3.4)	c	c	0.89	(0.03)	0.79	(0.02)	0.77	(0.07)	c	c	c	c
	Colombia	50.9	(1.6)	50.7	(1.7)	c	c	c	c	0.94	(0.04)	0.96	(0.05)	c	c	c	c	c	c
	Estonia	63.3	(3.6)	49.7	(1.2)	36.6	(1.7)	27.8	(2.8)	1.31	(0.14)	0.86	(0.03)	0.55	(0.04)	0.43	(0.05)	0.13	(0.08)
	Hong Kong-China	35.8	(2.6)	32.6	(1.5)	43.4	(1.7)	49.4	(2.3)	0.68	(0.07)	0.69	(0.04)	1.06	(0.06)	1.17	(0.09)	-0.11	(0.11)
	Croatia	31.8	(2.5)	25.3	(1.2)	19.7	(1.3)	14.2	(2.2)	0.62	(0.05)	0.43	(0.02)	0.33	(0.03)	0.19	(0.04)	**0.14**	(0.05)
	Indonesia	55.0	(1.4)	60.6	(2.9)	c	c	c	c	0.96	(0.03)	1.16	(0.09)	c	c	c	c	c	c
	Israel	53.4	(1.8)	48.9	(1.7)	46.4	(2.7)	41.7	(4.0)	1.10	(0.05)	0.93	(0.05)	0.93	(0.08)	0.73	(0.11)	0.20	(0.14)
	Jordan	66.4	(1.4)	64.3	(1.5)	59.3	(4.6)	c	c	1.58	(0.05)	1.49	(0.05)	1.43	(0.16)	c	c	c	c
	Kyrgyzstan	68.3	(1.1)	55.2	(2.3)	c	c	c	c	1.43	(0.03)	0.99	(0.06)	c	c	c	c	c	c
	Liechtenstein	48.8	(9.5)	36.4	(4.1)	20.7	(5.4)	12.0	(4.5)	0.98	(0.27)	0.57	(0.08)	0.35	(0.11)	0.19	(0.10)	0.17	(0.15)
	Lithuania	49.5	(2.1)	34.1	(1.2)	26.1	(2.5)	23.4	(4.9)	0.89	(0.05)	0.54	(0.02)	0.36	(0.04)	0.29	(0.06)	0.07	(0.07)
	Latvia	47.1	(2.2)	38.2	(1.3)	33.1	(2.3)	35.9	(5.3)	0.78	(0.05)	0.64	(0.03)	0.54	(0.05)	0.63	(0.14)	-0.09	(0.16)
	Macao-China	51.7	(3.0)	46.7	(1.2)	46.3	(2.2)	51.1	(3.6)	1.09	(0.09)	0.98	(0.04)	0.97	(0.08)	1.14	(0.19)	-0.17	(0.24)
	Montenegro	57.5	(1.3)	45.5	(1.3)	39.8	(5.1)	c	c	1.22	(0.04)	0.91	(0.04)	0.73	(0.15)	c	c	c	c
	Qatar	71.5	(0.8)	60.6	(1.7)	c	c	c	c	1.50	(0.03)	1.47	(0.06)	c	c	c	c	c	c
	Romania	54.7	(1.4)	56.0	(2.0)	54.8	(6.7)	c	c	1.05	(0.04)	1.00	(0.04)	1.02	(0.13)	c	c	c	c
	Russian Federation	61.2	(2.1)	58.3	(1.6)	54.9	(2.0)	61.2	(4.2)	1.16	(0.06)	1.11	(0.04)	1.08	(0.06)	1.33	(0.14)	-0.25	(0.15)
	Serbia	45.1	(1.3)	40.9	(1.2)	37.3	(3.3)	c	c	0.85	(0.04)	0.75	(0.03)	0.72	(0.11)	c	c	c	c
	Slovenia	55.9	(2.4)	46.4	(1.1)	40.1	(2.0)	36.3	(3.0)	0.93	(0.05)	0.75	(0.03)	0.64	(0.04)	0.52	(0.05)	0.12	(0.08)
	Chinese Taipei	29.0	(2.3)	34.2	(1.1)	38.4	(1.5)	37.4	(1.7)	0.43	(0.05)	0.69	(0.03)	0.95	(0.04)	1.01	(0.05)	-0.06	(0.07)
	Thailand	40.5	(1.5)	37.8	(1.6)	68.2	(4.8)	c	c	0.79	(0.04)	0.90	(0.05)	2.33	(0.25)	c	c	c	c
	Tunisia	44.3	(1.5)	54.4	(1.6)	c	c	c	c	1.77	(0.04)	2.17	(0.05)	c	c	c	c	c	c
	Uruguay	38.0	(1.7)	32.3	(1.4)	23.2	(2.8)	c	c	0.69	(0.04)	0.58	(0.04)	0.43	(0.08)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/1]

Table A3.2a Science teaching strategy: focus on applications

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.03	(0.04)	0.15	(0.02)	0.32	(0.03)	0.45	(0.03)	**-0.13**	(0.04)
	Austria	-0.13	(0.07)	-0.18	(0.03)	0.02	(0.04)	0.13	(0.05)	-0.11	(0.07)
	Belgium	-0.42	(0.06)	-0.22	(0.02)	0.00	(0.02)	0.14	(0.05)	**-0.14**	(0.05)
	Canada	0.27	(0.05)	0.34	(0.02)	0.41	(0.03)	0.54	(0.04)	**-0.13**	(0.06)
	Czech Republic	0.01	(0.06)	-0.22	(0.03)	-0.16	(0.04)	-0.03	(0.04)	**-0.13**	(0.05)
	Denmark	0.09	(0.04)	0.15	(0.02)	0.30	(0.04)	0.32	(0.05)	-0.02	(0.06)
	Finland	-0.25	(0.08)	-0.23	(0.03)	-0.08	(0.03)	0.01	(0.03)	**-0.09**	(0.04)
	France	-0.08	(0.05)	-0.04	(0.03)	0.09	(0.04)	0.15	(0.06)	-0.06	(0.08)
	Germany	0.01	(0.05)	-0.12	(0.03)	-0.08	(0.04)	-0.03	(0.04)	-0.06	(0.05)
	Greece	0.43	(0.04)	0.33	(0.03)	0.28	(0.04)	0.20	(0.09)	0.07	(0.09)
	Hungary	0.09	(0.07)	-0.02	(0.03)	-0.03	(0.04)	0.14	(0.08)	**-0.16**	(0.08)
	Iceland	-0.27	(0.05)	-0.01	(0.03)	0.13	(0.04)	0.31	(0.07)	**-0.18**	(0.09)
	Italy	0.12	(0.03)	-0.14	(0.02)	-0.18	(0.03)	-0.09	(0.06)	-0.09	(0.07)
	Ireland	0.03	(0.05)	-0.01	(0.03)	0.09	(0.04)	0.19	(0.06)	-0.10	(0.07)
	Japan	-0.87	(0.08)	-0.97	(0.03)	-0.93	(0.04)	-0.84	(0.06)	-0.09	(0.07)
	Korea	-0.51	(0.05)	-0.36	(0.02)	-0.25	(0.04)	-0.21	(0.07)	-0.04	(0.08)
	Luxembourg	-0.02	(0.04)	-0.21	(0.02)	-0.16	(0.05)	-0.24	(0.06)	0.09	(0.08)
	Mexico	0.41	(0.02)	0.37	(0.02)	0.52	(0.06)	c	c	c	c
	Netherlands	-0.27	(0.06)	-0.39	(0.03)	-0.18	(0.03)	-0.05	(0.03)	**-0.13**	(0.04)
	New Zealand	0.13	(0.06)	0.12	(0.03)	0.19	(0.04)	0.34	(0.04)	**-0.15**	(0.05)
	Norway	-0.12	(0.04)	-0.12	(0.02)	-0.06	(0.03)	0.12	(0.05)	**-0.18**	(0.06)
	Poland	0.22	(0.05)	0.07	(0.02)	0.07	(0.03)	0.13	(0.05)	-0.06	(0.06)
	Portugal	0.29	(0.04)	0.29	(0.03)	0.47	(0.05)	0.58	(0.09)	-0.11	(0.10)
	Slovak Republic	-0.12	(0.07)	-0.22	(0.03)	-0.05	(0.04)	0.01	(0.07)	-0.06	(0.07)
	Spain	-0.07	(0.04)	-0.06	(0.02)	0.05	(0.03)	0.16	(0.06)	-0.11	(0.07)
	Sweden	-0.14	(0.06)	-0.04	(0.03)	0.04	(0.04)	0.16	(0.05)	-0.12	(0.07)
	Switzerland	-0.16	(0.04)	0.11	(0.02)	0.27	(0.03)	0.37	(0.04)	**-0.10**	(0.05)
	Turkey	0.09	(0.04)	0.08	(0.03)	0.09	(0.08)	c	c	c	c
	United Kingdom	-0.02	(0.04)	-0.02	(0.02)	0.06	(0.03)	0.18	(0.03)	**-0.11**	(0.04)
	United States	0.42	(0.04)	0.38	(0.03)	0.41	(0.05)	0.45	(0.05)	-0.04	(0.07)
	OECD average	-0.05	(0.01)	-0.06	(0.00)	0.04	(0.01)	0.13	(0.01)	**-0.09**	(0.01)
Partners	Argentina	0.15	(0.04)	0.04	(0.04)	0.10	(0.10)	c	c	c	c
	Azerbaijan	0.65	(0.03)	0.64	(0.04)	c	c	c	c	c	c
	Brazil	0.21	(0.03)	0.17	(0.03)	0.38	(0.11)	c	c	c	c
	Bulgaria	0.53	(0.03)	0.40	(0.03)	0.42	(0.05)	0.44	(0.07)	-0.01	(0.09)
	Chile	0.43	(0.05)	0.43	(0.03)	0.42	(0.07)	c	c	c	c
	Colombia	0.60	(0.04)	0.61	(0.05)	c	c	c	c	c	c
	Croatia	0.03	(0.06)	0.09	(0.03)	0.17	(0.05)	0.24	(0.09)	-0.07	(0.12)
	Estonia	0.28	(0.08)	0.20	(0.02)	0.18	(0.03)	0.28	(0.04)	**-0.10**	(0.05)
	Hong Kong-China	-0.24	(0.12)	-0.11	(0.03)	0.08	(0.04)	0.17	(0.05)	-0.08	(0.07)
	Indonesia	0.19	(0.03)	-0.01	(0.05)	c	c	c	c	c	c
	Israel	0.11	(0.04)	0.02	(0.04)	0.06	(0.07)	-0.07	(0.10)	0.14	(0.12)
	Jordan	0.62	(0.03)	0.64	(0.03)	0.66	(0.08)	c	c	c	c
	Kyrgyzstan	0.78	(0.02)	0.54	(0.05)	c	c	c	c	c	c
	Latvia	0.28	(0.03)	0.22	(0.02)	0.32	(0.03)	0.42	(0.08)	-0.10	(0.09)
	Liechtenstein	-0.21	(0.17)	0.07	(0.09)	0.15	(0.12)	0.03	(0.14)	0.12	(0.19)
	Lithuania	0.22	(0.03)	0.20	(0.02)	0.28	(0.04)	0.40	(0.06)	-0.11	(0.08)
	Macao-China	-0.36	(0.06)	-0.24	(0.03)	0.02	(0.05)	0.10	(0.08)	-0.09	(0.09)
	Montenegro	0.25	(0.03)	0.03	(0.03)	-0.03	(0.11)	c	c	c	c
	Qatar	0.41	(0.02)	0.25	(0.04)	c	c	c	c	c	c
	Romania	0.27	(0.04)	0.16	(0.03)	0.19	(0.10)	c	c	c	c
	Russian Federation	0.58	(0.03)	0.50	(0.02)	0.53	(0.04)	0.62	(0.08)	-0.09	(0.09)
	Serbia	0.14	(0.03)	-0.09	(0.02)	-0.09	(0.07)	c	c	c	c
	Slovenia	0.11	(0.05)	-0.12	(0.03)	-0.19	(0.03)	-0.15	(0.05)	-0.04	(0.06)
	Chinese Taipei	-0.03	(0.05)	0.06	(0.03)	0.20	(0.03)	0.31	(0.03)	**-0.11**	(0.04)
	Thailand	0.52	(0.02)	0.71	(0.02)	0.79	(0.09)	c	c	c	c
	Tunisia	0.58	(0.02)	0.52	(0.03)	c	c	c	c	c	c
	Uruguay	0.11	(0.04)	0.02	(0.03)	0.10	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/1]

Table A3.2b Science teaching strategy: hands-on activities

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.31	(0.04)	0.37	(0.02)	0.42	(0.02)	0.40	(0.03)	0.01	(0.04)
	Austria	-0.28	(0.08)	-0.44	(0.04)	-0.48	(0.05)	-0.50	(0.07)	0.03	(0.08)
	Belgium	-0.45	(0.05)	-0.37	(0.03)	-0.28	(0.03)	-0.27	(0.04)	-0.01	(0.04)
	Canada	0.46	(0.05)	0.47	(0.02)	0.47	(0.02)	0.43	(0.03)	0.04	(0.04)
	Czech Republic	-0.01	(0.05)	-0.39	(0.03)	-0.41	(0.06)	-0.28	(0.06)	**-0.13**	(0.06)
	Denmark	0.54	(0.04)	0.65	(0.03)	0.80	(0.04)	0.84	(0.05)	-0.04	(0.06)
	Finland	-0.06	(0.10)	-0.07	(0.02)	0.06	(0.03)	0.17	(0.03)	**-0.11**	(0.04)
	France	0.03	(0.04)	0.21	(0.03)	0.54	(0.03)	0.64	(0.03)	**-0.10**	(0.04)
	Germany	0.12	(0.06)	0.12	(0.03)	0.21	(0.03)	0.22	(0.04)	-0.01	(0.05)
	Greece	0.40	(0.04)	-0.09	(0.03)	-0.44	(0.07)	-0.60	(0.11)	0.16	(0.11)
	Hungary	-0.37	(0.09)	-0.82	(0.03)	-0.92	(0.05)	-0.84	(0.08)	-0.07	(0.08)
	Iceland	-0.37	(0.05)	-0.64	(0.02)	-0.74	(0.04)	-0.82	(0.08)	0.08	(0.09)
	Ireland	0.41	(0.05)	0.38	(0.03)	0.37	(0.04)	0.32	(0.06)	0.05	(0.07)
	Italy	-0.11	(0.04)	-0.51	(0.03)	-0.53	(0.05)	-0.41	(0.07)	-0.13	(0.07)
	Japan	-0.54	(0.08)	-0.56	(0.05)	-0.51	(0.07)	-0.45	(0.11)	-0.06	(0.08)
	Korea	-0.29	(0.06)	-0.38	(0.04)	-0.48	(0.05)	-0.54	(0.08)	0.05	(0.07)
	Luxembourg	-0.14	(0.04)	-0.28	(0.03)	-0.19	(0.05)	-0.20	(0.06)	0.00	(0.08)
	Mexico	0.51	(0.03)	0.46	(0.03)	0.49	(0.07)	c	c	c	c
	Netherlands	0.20	(0.07)	0.02	(0.04)	0.12	(0.04)	0.14	(0.04)	-0.02	(0.06)
	New Zealand	0.34	(0.05)	0.30	(0.02)	0.34	(0.03)	0.33	(0.03)	0.00	(0.04)
	Norway	0.23	(0.04)	0.17	(0.03)	0.10	(0.06)	0.16	(0.06)	-0.06	(0.07)
	Poland	0.09	(0.05)	-0.22	(0.02)	-0.38	(0.03)	-0.37	(0.06)	-0.02	(0.06)
	Portugal	0.18	(0.05)	0.04	(0.03)	0.20	(0.04)	0.23	(0.07)	-0.04	(0.07)
	Slovak Republic	-0.06	(0.08)	-0.29	(0.03)	-0.15	(0.06)	-0.02	(0.08)	-0.13	(0.08)
	Spain	-0.16	(0.04)	-0.32	(0.03)	-0.34	(0.04)	-0.38	(0.05)	0.05	(0.06)
	Sweden	0.18	(0.07)	0.27	(0.03)	0.26	(0.04)	0.23	(0.05)	0.03	(0.06)
	Switzerland	-0.12	(0.04)	0.05	(0.02)	0.22	(0.03)	0.31	(0.05)	-0.09	(0.05)
	Turkey	0.22	(0.04)	-0.07	(0.04)	-0.22	(0.10)	c	c	c	c
	United Kingdom	0.39	(0.04)	0.44	(0.02)	0.48	(0.02)	0.51	(0.03)	-0.03	(0.03)
	United States	0.65	(0.04)	0.68	(0.02)	0.74	(0.04)	0.69	(0.05)	0.04	(0.06)
	OECD average	0.06	(0.01)	-0.04	(0.01)	-0.02	(0.01)	0.00	(0.01)	-0.02	(0.01)
Partners	Argentina	-0.04	(0.03)	-0.32	(0.06)	-0.32	(0.11)	c	c	c	c
	Azerbaijan	0.61	(0.03)	0.35	(0.04)	c	c	c	c	c	c
	Brazil	-0.20	(0.02)	-0.47	(0.04)	-0.27	(0.12)	c	c	c	c
	Bulgaria	0.43	(0.05)	-0.11	(0.04)	-0.39	(0.06)	-0.45	(0.10)	0.06	(0.12)
	Chile	0.43	(0.06)	0.20	(0.04)	0.13	(0.06)	c	c	c	c
	Colombia	0.31	(0.05)	0.30	(0.05)	c	c	c	c	c	c
	Croatia	-0.01	(0.06)	-0.38	(0.04)	-0.50	(0.06)	-0.47	(0.06)	-0.03	(0.09)
	Estonia	0.32	(0.07)	-0.02	(0.02)	-0.26	(0.03)	-0.34	(0.06)	0.07	(0.06)
	Hong Kong-China	0.10	(0.10)	0.19	(0.03)	0.36	(0.04)	0.40	(0.04)	-0.04	(0.06)
	Indonesia	0.37	(0.03)	0.33	(0.04)	c	c	c	c	c	c
	Israel	0.35	(0.05)	0.24	(0.04)	0.32	(0.08)	0.19	(0.11)	0.14	(0.13)
	Jordan	0.71	(0.03)	0.41	(0.04)	0.30	(0.08)	c	c	c	c
	Kyrgyzstan	0.88	(0.02)	0.48	(0.04)	c	c	c	c	c	c
	Latvia	0.25	(0.05)	-0.03	(0.03)	-0.07	(0.04)	-0.16	(0.06)	0.09	(0.07)
	Liechtenstein	-0.09	(0.20)	-0.02	(0.09)	-0.01	(0.10)	-0.17	(0.13)	0.16	(0.17)
	Lithuania	0.35	(0.04)	0.17	(0.03)	0.17	(0.04)	0.22	(0.07)	-0.05	(0.06)
	Macao-China	-0.15	(0.05)	-0.19	(0.02)	-0.09	(0.04)	0.00	(0.06)	-0.08	(0.08)
	Montenegro	-0.05	(0.03)	-0.69	(0.03)	-1.15	(0.11)	c	c	c	c
	Qatar	0.60	(0.02)	0.20	(0.04)	c	c	c	c	c	c
	Romania	0.44	(0.04)	0.19	(0.03)	0.07	(0.08)	c	c	c	c
	Russian Federation	0.75	(0.03)	0.57	(0.02)	0.47	(0.04)	0.41	(0.06)	0.06	(0.06)
	Serbia	-0.15	(0.05)	-0.71	(0.03)	-0.97	(0.06)	c	c	c	c
	Slovenia	0.12	(0.06)	-0.07	(0.02)	-0.04	(0.03)	-0.01	(0.04)	-0.03	(0.06)
	Chinese Taipei	0.17	(0.05)	-0.08	(0.03)	-0.16	(0.04)	-0.07	(0.04)	**-0.09**	(0.04)
	Thailand	0.60	(0.02)	0.62	(0.02)	0.82	(0.08)	c	c	c	c
	Tunisia	0.71	(0.02)	0.54	(0.03)	c	c	c	c	c	c
	Uruguay	0.24	(0.04)	0.04	(0.03)	0.08	(0.07)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/1]

Table A3.2c Science teaching strategy: interaction

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.03	(0.04)	0.15	(0.02)	0.31	(0.03)	0.35	(0.03)	-0.04	(0.04)
	Austria	0.35	(0.05)	0.17	(0.03)	0.08	(0.05)	-0.02	(0.07)	0.10	(0.07)
	Belgium	0.11	(0.04)	-0.10	(0.02)	-0.30	(0.03)	-0.40	(0.04)	**0.10**	(0.04)
	Canada	0.22	(0.05)	0.19	(0.02)	0.16	(0.04)	0.13	(0.04)	0.03	(0.07)
	Czech Republic	0.35	(0.05)	0.15	(0.03)	0.03	(0.04)	-0.05	(0.05)	0.08	(0.06)
	Denmark	0.05	(0.04)	-0.04	(0.03)	0.02	(0.05)	0.07	(0.07)	-0.05	(0.08)
	Finland	-0.03	(0.07)	-0.10	(0.02)	-0.13	(0.03)	-0.19	(0.03)	0.06	(0.04)
	France	0.05	(0.05)	-0.15	(0.02)	-0.33	(0.04)	-0.35	(0.07)	0.03	(0.08)
	Germany	0.30	(0.06)	0.13	(0.03)	0.02	(0.04)	-0.06	(0.05)	0.09	(0.06)
	Greece	0.78	(0.04)	0.55	(0.02)	0.40	(0.05)	0.22	(0.09)	0.18	(0.10)
	Hungary	0.23	(0.06)	0.19	(0.03)	0.13	(0.05)	0.22	(0.08)	-0.08	(0.09)
	Iceland	-0.28	(0.04)	-0.20	(0.02)	-0.11	(0.04)	-0.01	(0.05)	-0.09	(0.07)
	Ireland	-0.21	(0.05)	-0.39	(0.03)	-0.42	(0.04)	-0.40	(0.07)	-0.02	(0.08)
	Italy	0.60	(0.02)	0.38	(0.02)	0.10	(0.03)	0.04	(0.06)	0.06	(0.06)
	Japan	-0.81	(0.05)	-1.06	(0.03)	-1.27	(0.03)	-1.39	(0.04)	**0.12**	(0.05)
	Korea	-0.72	(0.04)	-0.96	(0.02)	-1.20	(0.04)	-1.31	(0.10)	0.11	(0.08)
	Luxembourg	0.19	(0.04)	-0.10	(0.03)	-0.26	(0.04)	-0.35	(0.08)	0.09	(0.09)
	Mexico	0.41	(0.02)	0.36	(0.02)	0.33	(0.07)	c	c	c	c
	Netherlands	0.12	(0.06)	-0.20	(0.03)	-0.37	(0.03)	-0.44	(0.06)	0.07	(0.07)
	New Zealand	0.07	(0.05)	0.11	(0.03)	0.20	(0.03)	0.22	(0.04)	-0.02	(0.05)
	Norway	0.09	(0.04)	0.08	(0.03)	0.03	(0.05)	0.07	(0.07)	-0.04	(0.09)
	Poland	0.18	(0.04)	0.02	(0.02)	-0.07	(0.03)	-0.12	(0.05)	0.05	(0.05)
	Portugal	0.50	(0.04)	0.37	(0.03)	0.28	(0.05)	0.18	(0.09)	0.10	(0.10)
	Slovak Republic	0.19	(0.06)	-0.10	(0.02)	-0.34	(0.04)	-0.51	(0.07)	**0.17**	(0.07)
	Spain	0.18	(0.04)	0.02	(0.02)	-0.06	(0.03)	-0.14	(0.07)	0.08	(0.08)
	Sweden	-0.04	(0.06)	-0.04	(0.03)	-0.05	(0.04)	-0.11	(0.06)	0.06	(0.07)
	Switzerland	0.09	(0.04)	0.07	(0.02)	-0.04	(0.03)	-0.16	(0.05)	0.11	(0.06)
	Turkey	0.43	(0.03)	0.49	(0.03)	0.37	(0.08)	c	c	c	c
	United Kingdom	0.12	(0.04)	0.08	(0.02)	0.09	(0.03)	0.08	(0.04)	0.00	(0.05)
	United States	0.40	(0.04)	0.32	(0.02)	0.23	(0.04)	0.06	(0.06)	**0.17**	(0.08)
	OECD average	0.11	(0.01)	-0.02	(0.00)	-0.10	(0.01)	-0.16	(0.01)	**0.05**	(0.01)
Partners	Argentina	0.35	(0.03)	0.35	(0.04)	0.27	(0.11)	c	c	c	c
	Azerbaijan	0.74	(0.03)	0.77	(0.04)	c	c	c	c	c	c
	Brazil	0.12	(0.02)	0.03	(0.03)	0.09	(0.08)	c	c	c	c
	Bulgaria	0.44	(0.04)	0.30	(0.03)	0.20	(0.04)	0.03	(0.11)	0.17	(0.12)
	Chile	0.39	(0.03)	0.22	(0.03)	0.11	(0.06)	c	c	c	c
	Colombia	0.37	(0.03)	0.41	(0.04)	c	c	c	c	c	c
	Croatia	0.39	(0.05)	0.30	(0.03)	0.17	(0.05)	0.16	(0.07)	0.01	(0.08)
	Estonia	0.40	(0.06)	0.28	(0.02)	0.14	(0.03)	0.13	(0.05)	0.02	(0.05)
	Hong Kong-China	-0.24	(0.09)	-0.31	(0.03)	-0.28	(0.03)	-0.29	(0.04)	0.01	(0.05)
	Indonesia	0.49	(0.03)	0.52	(0.04)	c	c	c	c	c	c
	Israel	0.30	(0.04)	0.30	(0.04)	0.29	(0.06)	0.14	(0.07)	0.15	(0.09)
	Jordan	0.82	(0.02)	0.72	(0.02)	0.68	(0.07)	c	c	c	c
	Kyrgyzstan	0.96	(0.02)	0.68	(0.05)	c	c	c	c	c	c
	Latvia	0.45	(0.04)	0.28	(0.02)	0.18	(0.05)	0.12	(0.11)	0.06	(0.12)
	Liechtenstein	0.05	(0.15)	-0.09	(0.08)	-0.19	(0.10)	-0.43	(0.15)	0.24	(0.19)
	Lithuania	0.33	(0.03)	0.09	(0.02)	-0.07	(0.04)	-0.12	(0.07)	0.05	(0.09)
	Macao-China	-0.26	(0.05)	-0.38	(0.03)	-0.52	(0.04)	-0.54	(0.09)	0.03	(0.10)
	Montenegro	0.37	(0.02)	0.12	(0.02)	-0.11	(0.09)	c	c	c	c
	Qatar	0.45	(0.02)	0.33	(0.04)	c	c	c	c	c	c
	Romania	0.40	(0.02)	0.35	(0.02)	0.17	(0.09)	c	c	c	c
	Russian Federation	0.51	(0.03)	0.45	(0.02)	0.33	(0.03)	0.34	(0.07)	-0.01	(0.08)
	Serbia	0.29	(0.03)	-0.02	(0.02)	-0.29	(0.05)	c	c	c	c
	Slovenia	0.34	(0.04)	0.17	(0.02)	0.09	(0.03)	-0.02	(0.04)	0.10	(0.05)
	Chinese Taipei	0.09	(0.05)	-0.01	(0.03)	-0.11	(0.04)	-0.13	(0.03)	0.02	(0.05)
	Thailand	0.08	(0.02)	0.02	(0.02)	0.11	(0.08)	c	c	c	c
	Tunisia	0.75	(0.02)	0.62	(0.03)	c	c	c	c	c	c
	Uruguay	0.36	(0.03)	0.26	(0.03)	0.18	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A3.2d Science teaching strategy: student investigations

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.46	(0.04)	0.18	(0.02)	0.08	(0.03)	0.05	(0.03)	0.03	(0.05)
	Austria	0.31	(0.08)	-0.20	(0.03)	-0.52	(0.04)	-0.67	(0.04)	**0.15**	(0.05)
	Belgium	0.28	(0.05)	-0.25	(0.02)	-0.58	(0.03)	-0.73	(0.03)	**0.14**	(0.04)
	Canada	0.67	(0.04)	0.24	(0.02)	-0.05	(0.02)	-0.22	(0.03)	**0.17**	(0.04)
	Czech Republic	0.31	(0.06)	-0.20	(0.03)	-0.43	(0.04)	-0.55	(0.04)	**0.12**	(0.05)
	Denmark	0.18	(0.04)	-0.14	(0.03)	-0.20	(0.04)	-0.23	(0.06)	0.03	(0.06)
	Finland	0.21	(0.08)	-0.16	(0.02)	-0.33	(0.03)	-0.47	(0.03)	**0.14**	(0.04)
	France	0.37	(0.05)	-0.03	(0.02)	-0.19	(0.04)	-0.25	(0.06)	0.06	(0.07)
	Germany	0.42	(0.08)	0.00	(0.03)	-0.27	(0.03)	-0.45	(0.05)	**0.17**	(0.05)
	Greece	0.84	(0.04)	0.32	(0.03)	-0.15	(0.05)	-0.38	(0.09)	**0.23**	(0.11)
	Hungary	0.19	(0.08)	-0.28	(0.03)	-0.49	(0.04)	-0.55	(0.06)	0.05	(0.07)
	Iceland	-0.13	(0.05)	-0.46	(0.02)	-0.55	(0.03)	-0.62	(0.07)	0.07	(0.08)
	Ireland	0.17	(0.05)	-0.23	(0.03)	-0.43	(0.04)	-0.58	(0.05)	**0.15**	(0.06)
	Italy	0.52	(0.03)	-0.11	(0.02)	-0.45	(0.02)	-0.53	(0.05)	0.08	(0.05)
	Japan	-0.01	(0.07)	-0.23	(0.03)	-0.29	(0.04)	-0.34	(0.06)	0.05	(0.05)
	Korea	0.15	(0.05)	-0.13	(0.03)	-0.37	(0.04)	-0.49	(0.11)	0.11	(0.10)
	Luxembourg	0.42	(0.04)	-0.19	(0.02)	-0.47	(0.05)	-0.70	(0.05)	**0.22**	(0.07)
	Mexico	0.92	(0.02)	0.64	(0.02)	0.43	(0.06)	c	c	c	c
	Netherlands	0.37	(0.06)	-0.12	(0.03)	-0.30	(0.03)	-0.33	(0.05)	0.02	(0.05)
	New Zealand	0.51	(0.05)	0.04	(0.02)	-0.11	(0.03)	-0.18	(0.04)	0.07	(0.05)
	Norway	0.24	(0.04)	-0.24	(0.03)	-0.56	(0.05)	-0.59	(0.06)	0.02	(0.08)
	Poland	0.61	(0.05)	0.09	(0.03)	-0.20	(0.04)	-0.25	(0.06)	0.05	(0.06)
	Portugal	0.83	(0.04)	0.38	(0.02)	0.14	(0.05)	-0.01	(0.08)	0.15	(0.09)
	Slovak Republic	0.41	(0.06)	-0.05	(0.03)	-0.25	(0.05)	-0.36	(0.05)	0.10	(0.07)
	Spain	0.26	(0.04)	-0.16	(0.02)	-0.41	(0.03)	-0.51	(0.05)	0.10	(0.06)
	Sweden	0.32	(0.05)	0.07	(0.03)	-0.12	(0.04)	-0.24	(0.05)	**0.11**	(0.06)
	Switzerland	0.46	(0.05)	0.13	(0.02)	-0.12	(0.03)	-0.30	(0.04)	**0.18**	(0.06)
	Turkey	0.94	(0.03)	0.73	(0.03)	0.43	(0.08)	c	c	c	c
	United Kingdom	0.30	(0.04)	-0.07	(0.02)	-0.18	(0.03)	-0.20	(0.03)	0.03	(0.04)
	United States	0.95	(0.05)	0.47	(0.03)	0.19	(0.05)	-0.02	(0.06)	**0.21**	(0.08)
	OECD average	0.38	(0.01)	-0.05	(0.00)	-0.27	(0.01)	-0.38	(0.01)	**0.11**	(0.01)
Partners	Argentina	0.63	(0.04)	0.11	(0.04)	-0.28	(0.09)	c	c	c	c
	Azerbaijan	1.33	(0.03)	1.05	(0.04)	c	c	c	c	c	c
	Brazil	0.62	(0.03)	0.26	(0.03)	-0.07	(0.10)	c	c	c	c
	Bulgaria	0.92	(0.04)	0.41	(0.03)	0.04	(0.05)	-0.07	(0.08)	0.10	(0.11)
	Chile	0.91	(0.04)	0.54	(0.03)	0.27	(0.05)	c	c	c	c
	Colombia	0.77	(0.05)	0.52	(0.06)	c	c	c	c	c	c
	Croatia	0.67	(0.05)	0.26	(0.03)	-0.01	(0.05)	-0.17	(0.06)	**0.16**	(0.08)
	Estonia	0.71	(0.07)	0.28	(0.03)	-0.07	(0.03)	-0.23	(0.05)	**0.16**	(0.05)
	Hong Kong-China	0.48	(0.07)	0.28	(0.02)	0.17	(0.03)	0.08	(0.04)	0.10	(0.05)
	Indonesia	0.90	(0.03)	0.53	(0.04)	c	c	c	c	c	c
	Israel	0.73	(0.04)	0.35	(0.04)	0.19	(0.08)	-0.04	(0.10)	0.22	(0.14)
	Jordan	1.20	(0.03)	0.92	(0.03)	0.74	(0.09)	c	c	c	c
	Kyrgyzstan	1.46	(0.02)	0.69	(0.06)	c	c	c	c	c	c
	Latvia	0.67	(0.04)	0.16	(0.02)	-0.16	(0.03)	-0.26	(0.10)	0.10	(0.11)
	Liechtenstein	0.33	(0.17)	0.14	(0.08)	-0.31	(0.10)	-0.52	(0.16)	0.21	(0.19)
	Lithuania	0.46	(0.04)	-0.05	(0.02)	-0.31	(0.04)	-0.40	(0.07)	0.08	(0.07)
	Macao-China	0.35	(0.06)	0.03	(0.03)	-0.10	(0.05)	-0.14	(0.10)	0.04	(0.13)
	Montenegro	0.62	(0.03)	-0.03	(0.02)	-0.47	(0.09)	c	c	c	c
	Qatar	1.02	(0.02)	0.43	(0.04)	c	c	c	c	c	c
	Romania	0.90	(0.04)	0.46	(0.03)	-0.03	(0.09)	c	c	c	c
	Russian Federation	0.91	(0.04)	0.54	(0.03)	0.29	(0.04)	0.22	(0.07)	0.08	(0.08)
	Serbia	0.43	(0.03)	-0.15	(0.03)	-0.50	(0.05)	c	c	c	c
	Slovenia	0.64	(0.04)	0.20	(0.02)	-0.08	(0.03)	-0.15	(0.04)	0.07	(0.05)
	Chinese Taipei	0.61	(0.05)	0.19	(0.03)	-0.06	(0.03)	-0.14	(0.03)	0.08	(0.04)
	Thailand	1.01	(0.02)	0.93	(0.02)	0.96	(0.09)	c	c	c	c
	Tunisia	1.08	(0.02)	0.72	(0.03)	c	c	c	c	c	c
	Uruguay	0.58	(0.03)	0.29	(0.03)	0.00	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/1]

Table A3.3a Students' science-related activities (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers		Difference in the mean index between strong performers and top performers after accounting for the PISA index of economic, social and cultural status	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	-0.60	(0.04)	-0.46	(0.02)	-0.12	(0.02)	0.25	(0.03)	**-0.37**	(0.04)	**-0.34**	(0.04)
	Austria	-0.19	(0.05)	-0.09	(0.03)	0.19	(0.04)	0.45	(0.05)	**-0.26**	(0.07)	**-0.25**	(0.07)
	Belgium	-0.20	(0.05)	-0.11	(0.02)	0.19	(0.03)	0.51	(0.04)	**-0.31**	(0.05)	**-0.29**	(0.05)
	Canada	-0.40	(0.05)	-0.31	(0.02)	-0.04	(0.03)	0.31	(0.03)	**-0.34**	(0.04)	**-0.32**	(0.04)
	Czech Republic	0.02	(0.06)	-0.02	(0.03)	0.11	(0.03)	0.33	(0.05)	**-0.22**	(0.06)	**-0.20**	(0.06)
	Denmark	-0.46	(0.04)	-0.24	(0.02)	0.17	(0.04)	0.44	(0.06)	**-0.27**	(0.08)	**-0.24**	(0.07)
	Finland	-0.47	(0.11)	-0.34	(0.02)	-0.11	(0.02)	0.18	(0.03)	**-0.30**	(0.04)	**-0.28**	(0.04)
	France	-0.23	(0.05)	-0.11	(0.03)	0.26	(0.03)	0.55	(0.05)	**-0.29**	(0.06)	**-0.26**	(0.06)
	Germany	-0.10	(0.05)	-0.01	(0.02)	0.27	(0.03)	0.53	(0.04)	**-0.26**	(0.06)	**-0.22**	(0.06)
	Greece	0.12	(0.05)	0.24	(0.03)	0.57	(0.04)	0.75	(0.08)	-0.18	(0.09)	-0.14	(0.09)
	Hungary	0.21	(0.05)	0.25	(0.02)	0.46	(0.04)	0.74	(0.06)	**-0.28**	(0.07)	**-0.26**	(0.07)
	Iceland	-0.62	(0.04)	-0.29	(0.03)	0.18	(0.04)	0.58	(0.06)	**-0.40**	(0.07)	**-0.38**	(0.07)
	Ireland	-0.76	(0.05)	-0.56	(0.02)	-0.14	(0.04)	0.12	(0.05)	**-0.26**	(0.06)	**-0.24**	(0.06)
	Italy	0.12	(0.02)	0.24	(0.01)	0.44	(0.03)	0.63	(0.04)	**-0.20**	(0.05)	**-0.18**	(0.05)
	Japan	-0.89	(0.05)	-0.74	(0.02)	-0.52	(0.03)	-0.23	(0.03)	**-0.29**	(0.04)	**-0.27**	(0.04)
	Korea	-0.55	(0.05)	-0.32	(0.03)	0.05	(0.04)	0.32	(0.07)	**-0.27**	(0.06)	**-0.22**	(0.06)
	Luxembourg	-0.05	(0.04)	0.03	(0.02)	0.34	(0.04)	0.63	(0.05)	**-0.28**	(0.07)	**-0.25**	(0.07)
	Mexico	0.78	(0.03)	0.67	(0.02)	0.86	(0.05)	c	c	c	c	c	c
	Netherlands	-0.28	(0.08)	-0.45	(0.03)	-0.14	(0.03)	0.19	(0.03)	**-0.33**	(0.04)	**-0.29**	(0.04)
	New Zealand	-0.41	(0.05)	-0.45	(0.03)	-0.16	(0.03)	0.21	(0.03)	**-0.36**	(0.05)	**-0.32**	(0.05)
	Norway	-0.35	(0.05)	-0.19	(0.02)	0.21	(0.04)	0.52	(0.05)	**-0.31**	(0.06)	**-0.29**	(0.06)
	Poland	0.63	(0.03)	0.60	(0.02)	0.71	(0.03)	0.87	(0.04)	**-0.16**	(0.05)	**-0.13**	(0.05)
	Portugal	0.29	(0.04)	0.43	(0.02)	0.70	(0.04)	0.88	(0.07)	**-0.18**	(0.07)	**-0.17**	(0.07)
	Slovak Republic	0.15	(0.07)	0.20	(0.02)	0.36	(0.03)	0.45	(0.05)	-0.08	(0.06)	-0.10	(0.06)
	Spain	-0.38	(0.04)	-0.20	(0.02)	0.13	(0.03)	0.38	(0.05)	**-0.25**	(0.06)	**-0.23**	(0.06)
	Sweden	-0.71	(0.04)	-0.49	(0.03)	-0.19	(0.04)	0.15	(0.05)	**-0.34**	(0.07)	**-0.31**	(0.07)
	Switzerland	-0.11	(0.04)	-0.10	(0.02)	0.19	(0.03)	0.47	(0.04)	**-0.29**	(0.05)	**-0.25**	(0.05)
	Turkey	0.41	(0.04)	0.64	(0.02)	1.03	(0.06)	c	c	c	c	c	c
	United Kingdom	-0.64	(0.05)	-0.48	(0.02)	-0.20	(0.03)	0.17	(0.04)	**-0.36**	(0.04)	**-0.33**	(0.04)
	United States	-0.15	(0.04)	-0.20	(0.02)	0.07	(0.04)	0.37	(0.05)	**-0.30**	(0.07)	**-0.28**	(0.07)
	OECD average	-0.25	(0.01)	-0.15	(0.00)	0.14	(0.01)	0.42	(0.01)	**-0.28**	(0.01)	**-0.25**	(0.01)
Partners	Argentina	0.50	(0.04)	0.35	(0.04)	0.35	(0.10)	c	c	c	c	c	c
	Azerbaijan	1.23	(0.02)	1.21	(0.03)	c	c	c	c	c	c	c	c
	Brazil	0.58	(0.02)	0.44	(0.03)	0.53	(0.09)	c	c	c	c	c	c
	Bulgaria	0.76	(0.04)	0.75	(0.02)	0.87	(0.03)	1.00	(0.07)	**-0.13**	(0.08)	**-0.10**	(0.08)
	Chile	0.41	(0.04)	0.51	(0.02)	0.67	(0.04)	c	c	c	c	c	c
	Colombia	1.04	(0.02)	0.94	(0.03)	c	c	c	c	c	c	c	c
	Croatia	0.24	(0.04)	0.32	(0.02)	0.52	(0.03)	0.71	(0.06)	**-0.19**	(0.08)	**-0.18**	(0.08)
	Estonia	0.38	(0.06)	0.37	(0.02)	0.41	(0.03)	0.52	(0.03)	**-0.11**	(0.04)	**-0.10**	(0.04)
	Hong Kong-China	-0.11	(0.06)	0.10	(0.02)	0.37	(0.03)	0.71	(0.03)	**-0.34**	(0.05)	**-0.31**	(0.05)
	Indonesia	0.55	(0.02)	0.60	(0.03)	c	c	c	c	c	c	c	c
	Israel	0.14	(0.05)	0.06	(0.04)	0.20	(0.07)	0.31	(0.10)	-0.11	(0.13)	-0.11	(0.13)
	Jordan	1.02	(0.03)	0.92	(0.02)	1.00	(0.06)	c	c	c	c	c	c
	Kyrgyzstan	1.40	(0.02)	0.90	(0.04)	c	c	c	c	c	c	c	c
	Latvia	0.27	(0.05)	0.21	(0.03)	0.32	(0.04)	0.48	(0.06)	**-0.17**	(0.07)	**-0.16**	(0.07)
	Liechtenstein	-0.15	(0.15)	-0.21	(0.08)	-0.05	(0.10)	0.14	(0.16)	-0.19	(0.19)	-0.13	(0.19)
	Lithuania	0.28	(0.04)	0.23	(0.02)	0.30	(0.04)	0.40	(0.07)	-0.09	(0.08)	-0.09	(0.09)
	Macao-China	0.12	(0.06)	0.19	(0.02)	0.46	(0.03)	0.65	(0.07)	**-0.19**	(0.09)	-0.16	(0.09)
	Montenegro	0.78	(0.02)	0.71	(0.02)	0.80	(0.07)	c	c	c	c	c	c
	Qatar	0.64	(0.02)	0.64	(0.03)	c	c	c	c	c	c	c	c
	Romania	0.60	(0.03)	0.66	(0.02)	0.84	(0.06)	c	c	c	c	c	c
	Russian Federation	0.55	(0.07)	0.55	(0.03)	0.58	(0.03)	0.69	(0.07)	-0.11	(0.08)	-0.11	(0.09)
	Serbia	0.55	(0.03)	0.51	(0.02)	0.71	(0.05)	c	c	c	c	c	c
	Slovenia	0.33	(0.06)	0.33	(0.02)	0.55	(0.04)	0.74	(0.04)	**-0.20**	(0.07)	**-0.17**	(0.07)
	Chinese Taipei	0.22	(0.05)	0.29	(0.02)	0.51	(0.02)	0.68	(0.02)	**-0.17**	(0.04)	**-0.12**	(0.04)
	Thailand	1.01	(0.01)	1.16	(0.01)	1.33	(0.05)	c	c	c	c	c	c
	Tunisia	1.14	(0.02)	1.06	(0.02)	c	c	c	c	c	c	c	c
	Uruguay	0.18	(0.03)	0.11	(0.02)	0.19	(0.08)	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/3]

Table A3.3b Students' science-related activities (underlying percentages), by performance group

		Percentage of students who do the following things regularly or very often															
		Watch TV programmes about science								Borrow or buy books on science topics							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	14.2	(1.1)	12.6	(0.6)	16.9	(0.8)	26.9	(1.3)	4.3	(0.6)	3.6	(0.3)	6.1	(0.5)	10.6	(0.8)
	Austria	15.1	(1.9)	12.7	(0.9)	20.2	(1.5)	30.4	(2.6)	7.9	(1.3)	4.2	(0.6)	8.9	(1.0)	12.2	(1.5)
	Belgium	21.6	(2.1)	20.2	(0.8)	26.9	(1.2)	39.2	(1.9)	7.5	(1.1)	6.1	(0.5)	10.1	(0.8)	17.3	(1.5)
	Canada	15.1	(1.4)	14.9	(0.7)	20.7	(1.0)	29.7	(1.3)	6.4	(0.9)	4.5	(0.4)	6.1	(0.6)	13.0	(1.0)
	Czech Republic	13.6	(1.7)	11.6	(0.7)	10.8	(1.3)	16.5	(1.9)	7.5	(1.5)	4.7	(0.6)	6.1	(1.0)	9.5	(1.4)
	Denmark	13.8	(1.6)	18.2	(0.8)	28.6	(2.0)	35.9	(3.1)	4.6	(0.8)	3.7	(0.4)	6.2	(0.9)	15.8	(2.4)
	Finland	13.0	(2.5)	12.8	(0.9)	16.3	(1.4)	22.5	(1.3)	2.3	(1.3)	2.1	(0.3)	3.0	(0.6)	5.7	(0.9)
	France	23.1	(1.7)	16.1	(1.0)	22.0	(1.5)	34.1	(3.3)	8.2	(1.2)	5.1	(0.5)	10.8	(1.3)	18.1	(2.2)
	Germany	14.7	(1.5)	13.2	(0.7)	21.3	(1.7)	34.9	(2.6)	7.2	(1.0)	4.8	(0.5)	7.6	(1.0)	12.6	(1.4)
	Greece	22.5	(1.8)	21.3	(1.0)	30.6	(1.9)	38.1	(4.5)	14.9	(1.5)	13.0	(0.9)	18.6	(1.8)	25.9	(4.0)
	Hungary	28.2	(2.7)	29.5	(1.0)	38.2	(1.9)	46.9	(3.6)	12.7	(2.2)	7.7	(0.7)	9.4	(0.9)	15.8	(2.7)
	Iceland	11.0	(1.1)	15.3	(0.8)	26.6	(2.0)	37.2	(4.0)	5.9	(0.8)	5.5	(0.5)	10.9	(1.4)	17.3	(2.6)
	Ireland	14.2	(1.7)	14.9	(0.9)	21.5	(1.5)	29.0	(2.2)	5.2	(1.2)	3.7	(0.5)	6.1	(0.9)	9.6	(1.7)
	Italy	24.3	(0.9)	23.4	(0.7)	27.9	(1.5)	35.2	(3.0)	8.9	(0.6)	7.7	(0.4)	10.0	(0.9)	16.9	(1.8)
	Japan	8.5	(1.3)	6.1	(0.5)	8.8	(0.9)	13.2	(1.2)	5.1	(1.0)	2.8	(0.4)	4.0	(0.6)	7.4	(0.8)
	Korea	8.2	(1.2)	6.6	(0.6)	10.9	(1.1)	14.5	(1.8)	5.0	(0.9)	4.5	(0.5)	10.3	(1.2)	19.3	(2.7)
	Luxembourg	19.9	(1.3)	18.6	(0.9)	29.2	(1.9)	39.3	(3.6)	9.8	(0.9)	7.2	(0.6)	11.0	(1.2)	20.2	(3.2)
	Mexico	43.2	(1.3)	42.3	(0.9)	52.0	(3.2)	c	c	30.4	(1.3)	23.6	(0.7)	30.2	(2.5)	c	c
	Netherlands	22.5	(2.4)	20.3	(1.0)	25.9	(1.4)	35.7	(1.9)	8.4	(2.0)	4.3	(0.5)	4.9	(0.9)	8.1	(1.3)
	New Zealand	14.5	(1.8)	13.4	(1.0)	17.0	(1.6)	25.1	(1.8)	6.6	(1.3)	4.8	(0.6)	7.3	(1.1)	12.4	(1.2)
	Norway	19.2	(1.8)	19.3	(0.8)	27.2	(1.9)	39.1	(3.0)	5.8	(1.0)	4.4	(0.4)	6.7	(1.0)	9.2	(1.8)
	Poland	44.0	(2.0)	44.6	(1.1)	51.5	(1.6)	59.1	(2.9)	14.7	(1.4)	12.9	(0.8)	15.0	(1.3)	20.0	(2.4)
	Portugal	35.7	(1.7)	39.1	(1.1)	53.7	(2.4)	65.8	(4.5)	16.7	(1.3)	12.6	(0.7)	18.0	(2.0)	26.8	(5.4)
	Slovak Republic	19.2	(1.7)	16.6	(0.9)	22.4	(1.9)	28.0	(3.6)	6.5	(1.2)	6.0	(0.5)	9.1	(1.4)	13.0	(2.6)
	Spain	12.9	(1.3)	10.7	(0.5)	14.9	(1.0)	18.9	(2.8)	5.5	(0.8)	4.2	(0.4)	6.3	(0.9)	11.4	(2.1)
	Sweden	7.6	(1.0)	9.2	(0.8)	12.9	(1.4)	19.5	(2.4)	2.3	(0.8)	1.6	(0.4)	2.4	(0.7)	4.1	(1.2)
	Switzerland	16.8	(1.5)	13.8	(0.7)	19.0	(1.4)	24.7	(1.7)	6.9	(1.0)	3.7	(0.3)	6.1	(0.7)	11.0	(1.3)
	Turkey	22.9	(1.2)	30.0	(1.2)	47.4	(4.0)	c	c	16.6	(1.0)	22.4	(1.1)	38.2	(3.8)	c	c
	United Kingdom	11.3	(1.2)	10.1	(0.6)	14.1	(1.2)	24.8	(1.7)	4.4	(0.7)	3.9	(0.4)	6.0	(0.7)	9.5	(1.1)
	United States	18.7	(1.3)	17.9	(1.1)	21.6	(2.0)	28.4	(2.7)	8.5	(1.1)	4.5	(0.5)	6.8	(1.2)	13.0	(2.1)
	OECD average	18.0	(0.3)	17.2	(0.2)	23.5	(0.3)	31.9	(0.5)	7.5	(0.2)	5.5	(0.1)	8.3	(0.2)	13.8	(0.4)
Partners	Argentina	34.2	(1.6)	35.7	(1.7)	34.0	(5.6)	c	c	28.5	(1.3)	20.8	(1.2)	17.7	(4.4)	c	c
	Azerbaijan	57.7	(1.1)	57.1	(1.4)	c	c	c	c	39.9	(1.7)	40.6	(2.0)	c	c	c	c
	Brazil	40.6	(1.1)	36.5	(1.4)	35.5	(4.5)	c	c	27.8	(1.1)	20.3	(1.2)	16.3	(3.0)	c	c
	Bulgaria	38.4	(1.5)	36.4	(1.4)	49.0	(3.1)	60.2	(5.6)	17.0	(1.4)	14.2	(1.2)	20.0	(2.9)	23.7	(4.7)
	Chile	35.8	(1.5)	45.1	(1.4)	52.3	(3.7)	c	c	20.8	(1.3)	18.6	(1.0)	18.5	(2.2)	c	c
	Colombia	56.6	(1.5)	63.6	(1.8)	c	c	c	c	41.3	(1.7)	37.3	(1.5)	c	c	c	c
	Croatia	26.3	(1.7)	28.3	(0.9)	36.8	(1.7)	47.1	(3.5)	7.8	(1.2)	8.7	(0.7)	14.4	(1.4)	24.1	(2.4)
	Estonia	26.6	(3.8)	25.1	(1.0)	27.1	(1.8)	30.3	(2.5)	8.4	(1.5)	5.7	(0.6)	6.2	(0.8)	8.4	(1.3)
	Hong Kong-China	11.8	(2.3)	13.6	(0.9)	21.2	(1.3)	34.1	(2.0)	6.9	(1.5)	8.3	(0.7)	14.4	(1.1)	25.4	(1.9)
	Indonesia	15.5	(0.9)	18.4	(1.0)	c	c	c	c	9.0	(0.7)	8.4	(0.8)	c	c	c	c
	Israel	30.0	(1.9)	21.8	(1.4)	23.1	(2.7)	27.0	(2.7)	19.7	(1.7)	11.6	(1.1)	12.2	(1.9)	11.6	(3.0)
	Jordan	47.1	(1.4)	38.3	(1.3)	36.7	(3.3)	c	c	29.5	(1.1)	22.5	(1.1)	21.3	(3.0)	c	c
	Kyrgyzstan	68.1	(1.1)	51.4	(2.7)	c	c	c	c	44.5	(1.0)	26.2	(2.2)	c	c	c	c
	Latvia	18.6	(2.0)	17.7	(0.9)	22.5	(1.8)	28.7	(3.7)	7.3	(1.1)	4.2	(0.5)	6.3	(1.0)	9.8	(2.6)
	Liechtenstein	14.3	(5.7)	13.3	(2.5)	13.4	(4.9)	19.4	(7.1)	2.4	(2.4)	3.6	(1.5)	4.5	(2.8)	5.2	(3.9)
	Lithuania	29.2	(1.9)	26.0	(0.9)	24.6	(1.5)	25.1	(3.4)	9.6	(1.2)	5.5	(0.5)	6.4	(1.1)	10.3	(2.6)
	Macao-China	18.4	(2.1)	18.7	(0.8)	26.7	(2.2)	36.3	(4.7)	10.3	(1.7)	7.3	(0.6)	11.8	(1.4)	17.7	(3.9)
	Montenegro	38.8	(1.3)	38.6	(1.2)	43.6	(5.4)	c	c	15.6	(0.9)	15.5	(0.9)	22.1	(4.4)	c	c
	Qatar	33.4	(0.8)	26.2	(1.5)	c	c	c	c	25.9	(0.6)	17.7	(1.1)	c	c	c	c
	Romania	29.6	(1.6)	32.1	(1.6)	48.6	(5.0)	c	c	15.9	(1.0)	12.1	(0.9)	17.0	(3.1)	c	c
	Russian Federation	32.5	(2.4)	35.4	(1.2)	42.6	(2.2)	49.0	(3.5)	20.7	(3.1)	18.1	(1.3)	17.7	(1.8)	23.1	(3.0)
	Serbia	37.3	(1.5)	34.9	(1.2)	47.3	(3.0)	c	c	12.2	(1.1)	8.9	(0.7)	12.3	(2.4)	c	c
	Slovenia	31.1	(1.9)	28.4	(1.0)	36.7	(1.9)	44.6	(3.0)	12.8	(1.7)	8.7	(0.7)	12.0	(1.6)	17.3	(2.4)
	Chinese Taipei	15.0	(1.6)	14.3	(0.9)	20.6	(1.2)	26.9	(1.9)	9.4	(1.2)	7.7	(0.6)	13.6	(0.8)	23.0	(1.4)
	Thailand	39.4	(1.0)	58.8	(1.2)	74.5	(3.3)	c	c	21.4	(1.1)	29.9	(1.1)	47.6	(5.0)	c	c
	Tunisia	45.1	(1.3)	41.5	(1.5)	c	c	c	c	35.4	(1.2)	28.3	(1.5)	c	c	c	c
	Uruguay	27.2	(1.3)	29.4	(1.1)	33.2	(3.7)	c	c	21.9	(1.2)	15.6	(0.9)	14.6	(2.5)	c	c

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[Part 2/3]

Table A3.3b Students' science-related activities (underlying percentages), by performance group

		Percentage of students who do the following things regularly or very often															
		Visit web sites about science topics								Listen to radio programmes about advances in science							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	6.5	(0.6)	8.1	(0.4)	13.7	(0.9)	22.7	(1.2)	4.3	(0.6)	2.8	(0.2)	3.8	(0.4)	6.2	(0.7)
	Austria	12.0	(1.8)	9.5	(0.8)	15.2	(1.4)	23.1	(3.0)	11.4	(1.3)	8.1	(0.7)	7.1	(1.0)	8.3	(1.5)
	Belgium	12.2	(1.6)	10.6	(0.7)	16.0	(1.2)	24.0	(2.0)	11.1	(1.1)	6.3	(0.6)	7.0	(0.6)	8.6	(1.2)
	Canada	9.9	(1.3)	8.9	(0.5)	13.8	(1.0)	22.7	(1.5)	5.6	(0.9)	4.1	(0.4)	4.6	(0.5)	7.6	(0.8)
	Czech Republic	7.9	(1.5)	5.8	(0.6)	7.9	(1.0)	10.1	(1.5)	8.4	(1.4)	3.6	(0.5)	2.4	(0.5)	3.7	(1.0)
	Denmark	7.7	(1.0)	8.0	(0.6)	14.5	(1.6)	24.9	(3.1)	6.4	(0.9)	4.6	(0.5)	6.5	(0.9)	6.8	(2.1)
	Finland	4.3	(1.6)	2.6	(0.4)	4.7	(0.6)	8.4	(1.1)	5.8	(1.7)	2.4	(0.4)	2.4	(0.4)	3.0	(0.6)
	France	9.9	(1.1)	10.7	(0.9)	17.0	(1.5)	21.9	(2.4)	9.9	(1.1)	5.6	(0.5)	7.0	(0.9)	9.6	(1.9)
	Germany	10.8	(1.6)	11.5	(0.8)	16.8	(1.3)	21.9	(2.4)	11.3	(1.4)	6.5	(0.6)	5.5	(0.9)	7.6	(1.0)
	Greece	15.1	(1.4)	14.5	(0.7)	23.2	(2.0)	31.7	(4.1)	15.7	(1.3)	8.2	(0.5)	8.6	(1.3)	9.7	(3.0)
	Hungary	11.9	(1.8)	11.4	(0.7)	17.4	(1.3)	24.9	(3.2)	7.9	(1.4)	6.3	(0.6)	7.6	(1.1)	7.4	(1.8)
	Iceland	6.3	(1.1)	10.4	(0.9)	19.1	(1.9)	30.0	(3.6)	4.3	(0.9)	2.7	(0.4)	3.1	(0.7)	4.3	(1.8)
	Ireland	8.7	(1.3)	6.9	(0.5)	11.1	(1.3)	13.3	(1.9)	4.6	(0.8)	4.3	(0.5)	6.2	(0.8)	7.6	(1.6)
	Italy	14.4	(0.9)	16.5	(0.6)	21.7	(1.1)	29.1	(2.3)	9.7	(0.8)	8.2	(0.5)	6.6	(0.8)	7.1	(1.3)
	Japan	4.0	(0.9)	4.1	(0.4)	5.8	(0.7)	9.6	(1.1)	2.7	(0.8)	1.2	(0.2)	0.8	(0.3)	0.9	(0.4)
	Korea	3.9	(1.0)	4.2	(0.5)	7.6	(1.0)	10.1	(2.4)	2.8	(0.7)	1.4	(0.3)	1.4	(0.4)	1.3	(0.5)
	Luxembourg	12.8	(1.0)	12.0	(0.6)	17.8	(1.6)	26.6	(2.9)	10.8	(1.0)	6.8	(0.6)	7.2	(1.0)	8.2	(2.1)
	Mexico	30.9	(1.1)	31.0	(0.9)	43.6	(3.1)	c	c	30.6	(1.3)	18.5	(0.8)	15.2	(2.2)	c	c
	Netherlands	11.4	(1.9)	7.7	(0.8)	12.1	(1.4)	20.8	(2.1)	13.5	(2.3)	4.3	(0.5)	3.3	(0.7)	5.2	(1.1)
	New Zealand	9.2	(1.4)	7.1	(0.7)	10.1	(1.2)	18.1	(1.4)	5.0	(1.0)	2.1	(0.4)	2.6	(0.7)	5.2	(1.0)
	Norway	13.6	(1.4)	12.3	(0.7)	19.6	(2.3)	30.7	(3.6)	7.3	(1.0)	5.1	(0.5)	5.9	(1.0)	7.1	(1.8)
	Poland	19.2	(1.5)	18.3	(0.8)	22.8	(1.7)	26.0	(2.6)	22.3	(1.6)	14.8	(0.7)	14.1	(1.4)	14.8	(2.3)
	Portugal	17.0	(1.4)	19.1	(0.9)	28.5	(1.9)	36.8	(5.7)	13.4	(1.2)	9.2	(0.7)	8.4	(1.5)	9.3	(3.5)
	Slovak Republic	8.0	(1.5)	6.7	(0.6)	8.8	(1.1)	12.4	(2.4)	11.0	(1.7)	6.1	(0.6)	5.4	(1.1)	7.5	(2.0)
	Spain	7.8	(0.8)	9.3	(0.5)	14.0	(1.0)	22.5	(2.1)	4.7	(0.7)	4.4	(0.3)	5.0	(0.9)	6.9	(2.0)
	Sweden	4.3	(0.9)	4.4	(0.5)	6.6	(1.1)	10.3	(1.8)	2.9	(0.7)	2.4	(0.3)	2.4	(0.6)	5.3	(1.3)
	Switzerland	11.1	(1.4)	8.1	(0.5)	13.3	(1.0)	23.2	(1.9)	9.7	(1.2)	6.1	(0.6)	7.3	(1.0)	9.2	(1.5)
	Turkey	16.8	(1.2)	24.1	(1.2)	38.1	(3.5)	c	c	15.8	(1.1)	14.8	(0.8)	15.7	(3.0)	c	c
	United Kingdom	9.1	(1.0)	9.4	(0.6)	13.8	(1.1)	20.0	(1.4)	3.5	(0.6)	1.6	(0.3)	2.7	(0.5)	4.9	(0.8)
	United States	11.4	(1.1)	10.8	(0.7)	15.2	(1.6)	22.4	(2.4)	9.2	(1.1)	2.5	(0.4)	4.0	(0.7)	6.4	(1.5)
	OECD average	10.0	(0.2)	9.6	(0.1)	14.6	(0.3)	21.4	(0.5)	8.4	(0.2)	5.1	(0.1)	5.3	(0.2)	6.8	(0.3)
Partners	Argentina	23.2	(1.2)	20.2	(1.5)	21.8	(4.8)	c	c	20.9	(1.2)	10.4	(1.0)	6.9	(3.2)	c	c
	Azerbaijan	25.6	(1.0)	24.1	(1.8)	c	c	c	c	39.6	(1.0)	39.9	(1.5)	c	c	c	c
	Brazil	20.1	(0.9)	21.3	(1.1)	29.7	(3.5)	c	c	24.5	(1.0)	13.1	(1.0)	7.1	(2.4)	c	c
	Bulgaria	30.3	(1.3)	32.6	(1.4)	34.5	(2.3)	37.4	(6.2)	21.9	(1.4)	15.0	(0.8)	11.8	(1.9)	10.9	(4.0)
	Chile	26.7	(1.4)	29.5	(1.1)	36.6	(3.3)	c	c	17.0	(1.2)	13.0	(1.0)	8.1	(1.4)	c	c
	Colombia	35.0	(1.3)	35.7	(1.6)	c	c	c	c	37.2	(1.2)	27.0	(1.6)	c	c	c	c
	Croatia	9.6	(1.1)	10.5	(0.6)	16.7	(1.5)	23.7	(2.8)	12.1	(1.5)	7.4	(0.5)	7.8	(0.9)	8.4	(1.9)
	Estonia	23.5	(2.7)	18.3	(0.9)	17.8	(1.3)	22.0	(1.9)	15.0	(3.2)	9.9	(0.8)	8.6	(0.9)	8.8	(1.3)
	Hong Kong-China	7.8	(1.7)	9.0	(0.7)	12.8	(1.0)	22.6	(1.6)	7.2	(1.8)	7.7	(0.7)	7.4	(1.0)	9.4	(1.0)
	Indonesia	6.1	(0.5)	5.0	(0.8)	c	c	c	c	17.1	(0.9)	11.9	(1.0)	c	c	c	c
	Israel	22.3	(1.5)	18.2	(1.2)	19.8	(2.4)	22.4	(3.8)	20.8	(1.6)	13.2	(1.1)	8.8	(1.5)	5.9	(2.2)
	Jordan	31.5	(1.2)	29.2	(1.1)	36.8	(3.4)	c	c	41.7	(1.2)	35.5	(1.2)	31.5	(3.6)	c	c
	Kyrgyzstan	30.4	(0.9)	16.1	(2.2)	c	c	c	c	62.4	(1.0)	37.7	(2.5)	c	c	c	c
	Latvia	12.9	(1.8)	9.9	(0.8)	10.0	(1.5)	14.8	(2.9)	15.3	(1.6)	9.4	(0.8)	6.7	(1.0)	6.3	(1.9)
	Liechtenstein	5.0	(3.4)	5.6	(1.7)	8.4	(3.4)	17.3	(6.4)	6.9	(4.0)	5.9	(2.1)	6.9	(3.3)	3.4	(3.3)
	Lithuania	15.1	(1.4)	13.8	(0.7)	16.5	(1.6)	18.9	(3.4)	13.9	(1.2)	8.6	(0.7)	6.3	(1.1)	4.2	(1.4)
	Macao-China	12.6	(1.9)	8.8	(0.8)	14.0	(1.5)	17.8	(3.6)	10.0	(1.4)	8.1	(0.6)	9.8	(1.2)	11.4	(2.7)
	Montenegro	20.4	(1.0)	20.0	(1.1)	21.0	(4.6)	c	c	30.9	(1.2)	23.0	(1.1)	16.0	(3.9)	c	c
	Qatar	30.7	(0.7)	28.6	(1.6)	c	c	c	c	21.6	(0.5)	12.5	(1.2)	c	c	c	c
	Romania	18.1	(1.1)	19.6	(1.1)	32.1	(4.2)	c	c	18.6	(1.7)	13.3	(0.9)	11.6	(4.6)	c	c
	Russian Federation	19.1	(3.2)	13.4	(1.2)	13.6	(1.9)	16.3	(3.1)	23.5	(3.2)	20.2	(1.4)	17.7	(1.6)	18.7	(2.4)
	Serbia	12.1	(0.9)	10.7	(0.8)	16.3	(2.1)	c	c	24.6	(1.2)	15.8	(0.9)	13.9	(2.3)	c	c
	Slovenia	17.1	(2.3)	13.2	(0.9)	17.0	(1.9)	24.0	(2.5)	17.0	(2.1)	9.5	(0.6)	8.1	(1.0)	9.0	(1.6)
	Chinese Taipei	11.6	(1.4)	10.3	(0.5)	14.0	(0.8)	17.8	(1.0)	10.9	(1.3)	6.4	(0.5)	7.1	(0.7)	6.7	(0.8)
	Thailand	17.7	(1.0)	26.2	(1.0)	38.9	(4.3)	c	c	25.8	(1.1)	23.4	(0.8)	20.7	(3.6)	c	c
	Tunisia	26.4	(1.1)	23.6	(1.6)	c	c	c	c	42.3	(1.1)	36.6	(1.4)	c	c	c	c
	Uruguay	16.0	(1.1)	12.8	(1.0)	14.2	(2.3)	c	c	12.1	(1.0)	6.0	(0.6)	3.7	(1.1)	c	c

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[Part 3/3]

Table A3.3b Students' science-related activities (underlying percentages), by performance group

		Percentage of students who do the following things regularly or very often															
		Read science magazines or science articles in newspapers								Attend a science club							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	6.3	(0.7)	6.1	(0.4)	11.4	(1.0)	21.8	(1.5)	1.8	(0.4)	1.2	(0.2)	1.1	(0.3)	1.4	(0.3)
	Austria	17.7	(1.8)	18.1	(1.1)	29.5	(1.6)	43.0	(2.2)	4.9	(1.0)	1.6	(0.3)	1.2	(0.5)	2.3	(0.7)
	Belgium	12.3	(1.0)	14.6	(0.9)	26.9	(1.5)	42.7	(2.1)	4.3	(0.9)	1.2	(0.2)	0.6	(0.2)	0.4	(0.3)
	Canada	9.9	(1.4)	10.4	(0.6)	16.7	(0.9)	28.4	(1.4)	3.5	(0.8)	1.1	(0.2)	0.8	(0.2)	1.8	(0.6)
	Czech Republic	13.3	(1.7)	11.7	(0.9)	17.3	(1.4)	27.2	(2.1)	6.7	(1.3)	3.0	(0.4)	3.9	(0.8)	5.2	(0.9)
	Denmark	9.7	(1.2)	14.7	(0.8)	30.2	(2.0)	42.1	(4.0)	3.1	(0.7)	1.3	(0.3)	1.6	(0.5)	0.4	(0.6)
	Finland	8.4	(2.4)	9.4	(0.7)	16.8	(1.2)	32.3	(1.9)	3.1	(1.4)	0.5	(0.2)	0.3	(0.2)	0.5	(0.2)
	France	15.4	(1.5)	17.0	(0.9)	30.6	(1.9)	50.2	(3.4)	3.2	(0.7)	0.8	(0.3)	1.4	(0.5)	1.3	(0.8)
	Germany	14.3	(1.7)	16.5	(0.9)	26.5	(1.3)	40.9	(2.5)	5.1	(0.9)	3.3	(0.4)	4.2	(0.7)	4.9	(1.0)
	Greece	24.2	(1.6)	32.0	(1.1)	52.4	(1.9)	59.7	(5.6)	17.5	(1.6)	16.6	(1.0)	20.4	(2.1)	23.9	(4.0)
	Hungary	19.0	(2.6)	21.3	(1.2)	30.7	(1.9)	41.3	(4.6)	13.2	(1.9)	7.3	(0.7)	8.2	(1.2)	17.7	(2.9)
	Iceland	14.1	(1.6)	24.3	(1.3)	44.0	(2.0)	64.9	(3.7)	3.0	(0.6)	0.7	(0.2)	0.4	(0.3)	0.5	(0.5)
	Ireland	7.2	(1.2)	7.8	(0.6)	15.2	(1.2)	23.4	(2.0)	2.1	(0.6)	1.1	(0.2)	0.8	(0.4)	0.6	(0.5)
	Italy	21.8	(1.2)	30.5	(0.8)	43.7	(1.6)	53.9	(2.3)	8.7	(0.8)	3.6	(0.3)	2.7	(0.6)	3.5	(1.3)
	Japan	5.5	(1.1)	5.3	(0.6)	8.6	(0.8)	15.8	(1.4)	3.1	(0.9)	1.8	(0.3)	1.1	(0.4)	1.8	(0.6)
	Korea	6.4	(1.2)	11.0	(0.7)	23.3	(1.7)	35.1	(3.3)	2.4	(0.7)	3.2	(0.4)	6.9	(1.3)	9.9	(3.7)
	Luxembourg	16.1	(1.3)	17.5	(0.9)	32.0	(2.0)	46.8	(3.2)	6.5	(0.9)	2.4	(0.4)	2.2	(0.6)	4.2	(1.4)
	Mexico	40.3	(1.2)	43.9	(1.1)	61.1	(3.6)	c	c	13.2	(0.9)	3.9	(0.5)	3.1	(1.2)	c	c
	Netherlands	16.1	(2.7)	9.0	(0.7)	16.7	(1.3)	31.7	(2.0)	8.3	(1.5)	2.3	(0.4)	1.7	(0.5)	2.3	(0.9)
	New Zealand	9.4	(1.4)	5.5	(0.6)	10.2	(1.2)	21.2	(1.5)	1.7	(0.6)	1.1	(0.3)	1.0	(0.4)	1.3	(0.5)
	Norway	11.5	(1.4)	13.6	(0.8)	26.7	(2.0)	40.4	(2.9)	7.1	(1.0)	3.8	(0.4)	3.9	(0.8)	4.7	(1.6)
	Poland	25.4	(1.8)	28.7	(1.0)	38.4	(2.0)	49.7	(3.6)	9.1	(1.2)	10.0	(0.7)	12.4	(1.4)	19.4	(2.6)
	Portugal	20.2	(1.6)	28.3	(1.0)	46.8	(1.9)	58.0	(5.6)	8.7	(1.1)	3.5	(0.5)	2.8	(0.8)	2.2	(1.8)
	Slovak Republic	15.9	(2.2)	17.8	(1.0)	26.6	(1.8)	32.6	(2.9)	4.5	(1.1)	3.2	(0.5)	3.4	(1.0)	3.8	(1.4)
	Spain	9.3	(1.0)	14.3	(0.6)	26.8	(1.3)	38.0	(2.9)	5.1	(0.8)	4.4	(0.4)	5.3	(0.8)	6.6	(1.5)
	Sweden	4.8	(1.0)	8.7	(0.8)	19.1	(1.6)	34.1	(2.7)	1.9	(0.6)	1.1	(0.3)	1.5	(0.5)	1.1	(0.6)
	Switzerland	13.7	(1.3)	16.4	(0.8)	25.8	(1.2)	40.5	(2.2)	8.6	(1.2)	3.2	(0.4)	3.8	(0.6)	6.4	(1.4)
	Turkey	25.6	(1.2)	36.0	(1.2)	57.2	(3.6)	c	c	11.1	(0.9)	9.6	(0.7)	12.5	(2.9)	c	c
	United Kingdom	5.1	(0.8)	4.7	(0.5)	9.4	(0.9)	19.7	(1.4)	3.7	(0.8)	2.7	(0.5)	2.2	(0.4)	3.0	(0.8)
	United States	14.2	(1.2)	12.1	(0.9)	19.2	(1.8)	31.6	(2.7)	5.7	(0.9)	3.4	(0.6)	3.6	(0.8)	5.0	(1.1)
	OECD average	13.1	(0.3)	15.3	(0.2)	25.8	(0.3)	38.1	(0.6)	5.6	(0.2)	3.2	(0.1)	3.5	(0.1)	4.9	(0.3)
Partners	Argentina	33.9	(1.3)	35.0	(1.6)	46.3	(4.6)	c	c	13.2	(1.5)	4.9	(0.6)	3.4	(1.7)	c	c
	Azerbaijan	43.5	(1.3)	48.6	(1.9)	c	c	c	c	34.0	(1.4)	32.5	(2.3)	c	c	c	c
	Brazil	37.8	(1.1)	40.1	(1.3)	52.4	(4.8)	c	c	18.7	(1.0)	7.1	(1.0)	4.6	(1.9)	c	c
	Bulgaria	27.3	(1.3)	34.6	(1.3)	44.3	(2.9)	54.3	(4.9)	13.7	(1.4)	7.3	(0.9)	10.0	(2.0)	14.3	(4.2)
	Chile	24.1	(1.2)	31.2	(1.1)	44.0	(3.2)	c	c	13.0	(1.2)	7.1	(0.6)	6.3	(2.0)	c	c
	Colombia	52.7	(1.6)	55.2	(2.1)	c	c	c	c	18.3	(1.3)	9.2	(1.3)	c	c	c	c
	Croatia	22.0	(1.5)	29.1	(0.9)	43.4	(2.1)	57.2	(3.3)	8.2	(1.3)	2.6	(0.3)	2.0	(0.6)	3.1	(1.2)
	Estonia	22.2	(3.1)	19.2	(0.9)	24.8	(1.4)	30.3	(2.1)	8.4	(2.3)	6.2	(0.6)	6.7	(1.0)	8.4	(1.5)
	Hong Kong-China	11.3	(2.1)	12.9	(0.8)	19.6	(1.2)	33.3	(2.0)	6.1	(1.6)	6.7	(0.6)	8.5	(0.9)	13.9	(1.3)
	Indonesia	17.2	(0.8)	20.7	(1.8)	c	c	c	c	10.3	(0.7)	7.9	(1.1)	c	c	c	c
	Israel	25.3	(1.2)	25.0	(1.3)	29.3	(2.5)	33.7	(4.5)	16.4	(1.5)	9.9	(0.9)	9.3	(1.4)	5.9	(1.9)
	Jordan	45.6	(1.3)	45.6	(1.3)	52.7	(3.7)	c	c	26.8	(1.1)	17.7	(1.0)	18.1	(3.6)	c	c
	Kyrgyzstan	64.1	(0.9)	52.1	(2.5)	c	c	c	c	36.5	(1.0)	12.0	(1.7)	c	c	c	c
	Latvia	17.9	(2.3)	17.6	(1.2)	25.3	(2.1)	39.1	(3.9)	4.2	(0.7)	2.2	(0.4)	2.9	(0.8)	4.8	(1.7)
	Liechtenstein	17.4	(6.7)	13.8	(2.9)	16.7	(5.6)	30.0	(9.0)	2.8	(2.8)	2.5	(1.2)	2.9	(2.1)	3.0	(2.6)
	Lithuania	18.2	(1.4)	16.3	(0.8)	19.5	(1.9)	25.6	(3.0)	5.3	(0.9)	3.3	(0.4)	3.9	(0.8)	4.5	(1.7)
	Macao-China	16.4	(2.0)	16.5	(0.8)	26.7	(2.1)	35.9	(3.7)	6.1	(1.6)	3.4	(0.4)	4.5	(0.8)	7.9	(1.8)
	Montenegro	38.1	(1.2)	40.4	(1.2)	49.8	(4.7)	c	c	11.6	(0.7)	3.6	(0.5)	1.6	(1.7)	c	c
	Qatar	34.8	(0.7)	38.7	(1.6)	c	c	c	c	17.5	(0.5)	6.2	(1.0)	c	c	c	c
	Romania	29.8	(1.4)	37.5	(1.2)	48.7	(5.2)	c	c	12.0	(1.1)	5.2	(0.9)	3.6	(1.8)	c	c
	Russian Federation	29.4	(2.9)	31.4	(1.2)	34.9	(2.6)	43.1	(4.4)	14.4	(2.8)	8.0	(1.2)	7.0	(1.3)	9.3	(2.2)
	Serbia	24.5	(1.1)	26.8	(1.0)	39.6	(3.0)	c	c	7.8	(0.6)	5.3	(0.5)	9.7	(2.2)	c	c
	Slovenia	18.2	(1.9)	19.4	(0.9)	31.0	(1.8)	41.1	(2.3)	12.8	(2.1)	7.1	(0.6)	8.7	(1.0)	15.8	(1.8)
	Chinese Taipei	14.3	(1.7)	15.1	(0.8)	25.7	(1.1)	38.1	(1.8)	10.8	(1.4)	5.6	(0.5)	7.3	(0.7)	10.4	(1.1)
	Thailand	33.5	(1.2)	46.1	(1.1)	64.5	(3.9)	c	c	34.4	(1.3)	38.3	(1.3)	39.1	(3.6)	c	c
	Tunisia	48.7	(1.2)	49.1	(1.6)	c	c	c	c	29.4	(1.2)	17.4	(1.3)	c	c	c	c
	Uruguay	21.0	(1.4)	21.4	(0.9)	29.4	(3.5)	c	c	8.3	(0.8)	3.6	(0.5)	1.9	(0.7)	c	c

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[Part 1/1]

Table A3.3c Parents' report of students' science activities at age 10

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between the strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Denmark	-0.25	(0.05)	-0.06	(0.03)	0.19	(0.05)	0.41	(0.07)	**-0.22**	(0.09)
	Germany	-0.29	(0.04)	-0.20	(0.02)	-0.02	(0.03)	0.20	(0.04)	**-0.22**	(0.05)
	Iceland	-0.79	(0.06)	-0.51	(0.04)	-0.10	(0.05)	0.26	(0.08)	**-0.35**	(0.10)
	Italy	0.07	(0.03)	0.19	(0.02)	0.31	(0.03)	0.54	(0.05)	**-0.23**	(0.06)
	Korea	-0.21	(0.05)	0.00	(0.03)	0.22	(0.03)	0.46	(0.06)	**-0.23**	(0.07)
	Luxembourg	-0.30	(0.04)	-0.05	(0.02)	0.29	(0.04)	0.57	(0.07)	**-0.28**	(0.08)
	New Zealand	-0.25	(0.07)	-0.06	(0.03)	0.16	(0.04)	0.40	(0.03)	**-0.25**	(0.06)
	Poland	m	m	m	m	m	m	m	m	m	m
	Portugal	-0.49	(0.05)	-0.06	(0.03)	0.30	(0.05)	0.60	(0.09)	**-0.30**	(0.11)
	Turkey	-0.06	(0.03)	0.17	(0.03)	0.58	(0.08)	c	c	c	c
Partners	Bulgaria	0.31	(0.05)	0.49	(0.02)	0.68	(0.04)	0.76	(0.07)	-0.08	(0.09)
	Colombia	0.26	(0.03)	0.51	(0.04)	0.70	(0.27)	c	c	c	c
	Croatia	-0.04	(0.05)	0.14	(0.02)	0.42	(0.04)	0.64	(0.07)	**-0.22**	(0.09)
	Hong Kong-China	-0.15	(0.09)	0.01	(0.03)	0.21	(0.03)	0.44	(0.04)	**-0.23**	(0.05)
	Macao-China	-0.19	(0.06)	-0.10	(0.02)	0.09	(0.04)	0.16	(0.08)	-0.08	(0.11)
	Qatar	0.45	(0.02)	0.57	(0.04)	0.85	(0.09)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/1]

Table A3.4a General interest in science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Differences in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.72	(0.05)	-0.37	(0.02)	0.01	(0.02)	0.30	(0.02)	**-0.29**	(0.03)
	Austria	-0.26	(0.04)	-0.01	(0.02)	0.25	(0.03)	0.42	(0.05)	**-0.18**	(0.06)
	Belgium	-0.43	(0.07)	-0.08	(0.02)	0.30	(0.02)	0.58	(0.03)	**-0.28**	(0.04)
	Canada	-0.32	(0.04)	-0.01	(0.02)	0.25	(0.02)	0.48	(0.03)	**-0.23**	(0.04)
	Czech Republic	-0.25	(0.07)	-0.08	(0.02)	0.08	(0.03)	0.22	(0.03)	**-0.15**	(0.04)
	Denmark	-0.61	(0.05)	-0.23	(0.02)	0.19	(0.04)	0.45	(0.07)	**-0.27**	(0.09)
	Finland	-0.80	(0.12)	-0.51	(0.03)	-0.13	(0.02)	0.22	(0.03)	**-0.36**	(0.04)
	France	-0.25	(0.04)	0.14	(0.03)	0.54	(0.03)	0.82	(0.05)	**-0.28**	(0.07)
	Germany	-0.18	(0.07)	0.12	(0.02)	0.37	(0.03)	0.56	(0.04)	**-0.18**	(0.06)
	Greece	-0.12	(0.04)	0.21	(0.02)	0.56	(0.04)	0.69	(0.10)	**-0.13**	(0.11)
	Hungary	-0.27	(0.06)	-0.13	(0.02)	0.08	(0.03)	0.34	(0.06)	**-0.26**	(0.07)
	Iceland	-0.69	(0.05)	-0.19	(0.03)	0.30	(0.04)	0.59	(0.06)	**-0.28**	(0.07)
	Ireland	-0.71	(0.06)	-0.23	(0.03)	0.21	(0.03)	0.46	(0.05)	**-0.25**	(0.06)
	Italy	-0.02	(0.02)	0.18	(0.01)	0.39	(0.02)	0.58	(0.04)	**-0.19**	(0.04)
	Japan	-0.83	(0.06)	-0.24	(0.03)	0.09	(0.03)	0.38	(0.03)	**-0.30**	(0.04)
	Korea	-0.85	(0.06)	-0.37	(0.02)	0.06	(0.02)	0.29	(0.04)	**-0.22**	(0.04)
	Luxembourg	-0.14	(0.04)	0.12	(0.02)	0.38	(0.03)	0.60	(0.06)	**-0.21**	(0.06)
	Mexico	0.72	(0.03)	0.80	(0.02)	0.83	(0.04)	c	c	c	c
	Netherlands	-0.62	(0.09)	-0.51	(0.03)	-0.17	(0.03)	0.21	(0.04)	**-0.38**	(0.05)
	New Zealand	-0.45	(0.05)	-0.24	(0.03)	0.06	(0.03)	0.30	(0.03)	**-0.24**	(0.04)
	Norway	-0.58	(0.07)	-0.05	(0.03)	0.41	(0.04)	0.65	(0.08)	**-0.24**	(0.10)
	Poland	-0.10	(0.03)	0.01	(0.02)	0.21	(0.03)	0.41	(0.04)	**-0.20**	(0.05)
	Portugal	-0.04	(0.04)	0.14	(0.02)	0.47	(0.04)	0.71	(0.08)	**-0.23**	(0.08)
	Slovak Republic	-0.36	(0.06)	-0.13	(0.02)	0.12	(0.03)	0.23	(0.06)	-0.12	(0.06)
	Spain	-0.52	(0.04)	-0.21	(0.02)	0.13	(0.02)	0.36	(0.04)	**-0.23**	(0.04)
	Sweden	-0.68	(0.08)	-0.17	(0.03)	0.15	(0.04)	0.46	(0.04)	**-0.31**	(0.05)
	Switzerland	-0.44	(0.04)	-0.08	(0.02)	0.27	(0.02)	0.49	(0.03)	**-0.22**	(0.04)
	Turkey	0.04	(0.03)	0.34	(0.03)	0.68	(0.06)	c	c	c	c
	United Kingdom	-0.35	(0.04)	-0.09	(0.02)	0.16	(0.03)	0.40	(0.03)	**-0.24**	(0.04)
	United States	-0.08	(0.07)	-0.05	(0.02)	0.19	(0.03)	0.40	(0.04)	**-0.21**	(0.05)
	OECD average	-0.42	(0.01)	-0.11	(0.00)	0.21	(0.01)	0.45	(0.01)	**-0.24**	(0.01)
Partners	Argentina	0.24	(0.03)	0.20	(0.03)	0.25	(0.09)	c	c	c	c
	Azerbaijan	0.54	(0.03)	0.78	(0.04)	c	c	c	c	c	c
	Brazil	0.51	(0.02)	0.51	(0.03)	0.57	(0.09)	c	c	c	c
	Bulgaria	0.08	(0.03)	0.22	(0.02)	0.36	(0.04)	0.44	(0.08)	-0.08	(0.10)
	Chile	0.33	(0.03)	0.34	(0.03)	0.50	(0.04)	c	c	c	c
	Colombia	1.20	(0.03)	1.07	(0.03)	c	c	c	c	c	c
	Croatia	-0.08	(0.04)	0.16	(0.02)	0.36	(0.04)	0.49	(0.06)	-0.13	(0.07)
	Estonia	0.01	(0.06)	0.13	(0.02)	0.27	(0.03)	0.42	(0.03)	**-0.15**	(0.05)
	Hong Kong-China	-0.42	(0.09)	0.04	(0.03)	0.37	(0.03)	0.63	(0.03)	**-0.26**	(0.04)
	Indonesia	0.49	(0.02)	0.65	(0.03)	c	c	c	c	c	c
	Israel	-0.43	(0.06)	-0.21	(0.04)	0.11	(0.06)	0.21	(0.09)	-0.10	(0.12)
	Jordan	0.52	(0.03)	0.77	(0.02)	1.01	(0.06)	c	c	c	c
	Kyrgyzstan	0.93	(0.02)	0.74	(0.04)	c	c	c	c	c	c
	Latvia	0.14	(0.04)	0.14	(0.02)	0.23	(0.03)	0.35	(0.07)	-0.12	(0.08)
	Liechtenstein	-0.25	(0.22)	-0.22	(0.10)	0.14	(0.10)	0.40	(0.18)	-0.26	(0.23)
	Lithuania	0.19	(0.03)	0.32	(0.02)	0.53	(0.03)	0.66	(0.07)	-0.13	(0.08)
	Macao-China	-0.22	(0.05)	0.03	(0.02)	0.33	(0.03)	0.54	(0.08)	**-0.21**	(0.09)
	Montenegro	0.30	(0.03)	0.52	(0.03)	0.77	(0.11)	c	c	c	c
	Qatar	0.23	(0.02)	0.49	(0.03)	c	c	c	c	c	c
	Romania	0.27	(0.04)	0.47	(0.02)	0.56	(0.06)	c	c	c	c
	Russian Federation	0.20	(0.04)	0.29	(0.02)	0.33	(0.03)	0.40	(0.06)	-0.08	(0.07)
	Serbia	0.19	(0.03)	0.28	(0.02)	0.45	(0.05)	c	c	c	c
	Slovenia	-0.27	(0.04)	-0.04	(0.02)	0.18	(0.03)	0.36	(0.05)	**-0.18**	(0.06)
	Chinese Taipei	-0.46	(0.06)	-0.04	(0.02)	0.31	(0.02)	0.50	(0.02)	**-0.19**	(0.03)
	Thailand	0.66	(0.03)	0.89	(0.02)	1.07	(0.07)	c	c	c	c
	Tunisia	0.66	(0.02)	0.95	(0.03)	c	c	c	c	c	c
	Uruguay	0.26	(0.03)	0.23	(0.03)	0.30	(0.05)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/4]

Table A3.4b General interest in science (underlying percentages), by performance group

		Percentage of students reporting high or medium interest in the following															
		Topics in physics								Topics in chemistry							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	31.3	(1.6)	37.2	(0.9)	51.5	(1.2)	66.2	(1.5)	31.5	(1.6)	40.2	(0.8)	55.3	(1.1)	72.2	(1.7)
	Austria	45.2	(1.8)	44.6	(1.3)	54.5	(2.0)	66.7	(2.8)	43.2	(2.1)	44.1	(1.2)	50.8	(1.9)	58.4	(2.7)
	Belgium	44.0	(1.9)	46.5	(1.0)	58.8	(1.3)	71.8	(1.9)	36.7	(2.5)	46.5	(1.1)	61.6	(1.4)	76.8	(2.1)
	Canada	42.6	(2.1)	49.9	(1.0)	61.8	(1.4)	74.8	(1.5)	46.8	(2.0)	57.7	(0.9)	70.7	(1.1)	82.8	(1.3)
	Czech Republic	41.9	(3.0)	45.2	(1.6)	50.0	(2.2)	55.0	(2.5)	38.5	(2.9)	35.8	(1.5)	43.2	(2.5)	52.5	(2.8)
	Denmark	38.5	(2.0)	48.3	(1.2)	65.3	(2.1)	77.9	(3.0)	37.9	(2.1)	50.4	(1.3)	67.5	(2.1)	77.9	(3.3)
	Finland	25.8	(3.8)	29.7	(1.3)	43.6	(1.9)	63.2	(2.0)	30.3	(4.7)	35.2	(1.4)	46.7	(1.8)	63.6	(1.8)
	France	54.6	(1.4)	62.9	(1.2)	74.3	(1.8)	84.6	(2.1)	42.6	(1.7)	56.2	(1.2)	75.5	(1.6)	83.6	(2.4)
	Germany	47.3	(2.6)	51.2	(1.3)	62.7	(1.8)	74.2	(2.1)	47.8	(2.4)	56.5	(1.4)	63.1	(2.0)	73.4	(2.0)
	Greece	44.0	(2.1)	50.9	(1.3)	70.5	(2.7)	79.3	(5.1)	43.3	(2.3)	52.7	(1.2)	67.0	(2.2)	73.0	(4.6)
	Hungary	39.0	(2.7)	36.7	(1.3)	46.6	(2.1)	63.0	(3.2)	34.3	(2.6)	32.0	(1.2)	40.8	(2.1)	57.9	(3.5)
	Iceland	29.8	(1.9)	47.3	(1.4)	67.3	(2.3)	79.7	(3.2)	30.8	(2.1)	43.9	(1.5)	63.4	(2.0)	77.0	(3.4)
	Ireland	30.9	(2.1)	35.9	(1.3)	50.5	(1.7)	62.6	(3.0)	30.2	(2.0)	38.0	(1.3)	54.9	(2.7)	69.4	(3.5)
	Italy	39.8	(1.3)	41.9	(0.9)	54.2	(1.5)	67.8	(2.2)	36.3	(1.4)	44.6	(1.0)	59.2	(1.7)	74.0	(2.4)
	Japan	23.9	(1.8)	35.2	(1.2)	45.8	(1.4)	59.4	(2.2)	24.0	(1.9)	41.0	(1.6)	57.5	(1.9)	72.6	(1.6)
	Korea	19.2	(2.1)	25.7	(1.2)	38.4	(1.7)	51.7	(3.4)	19.9	(2.0)	35.8	(1.3)	55.6	(2.1)	67.8	(3.3)
	Luxembourg	47.8	(1.9)	52.4	(1.3)	66.3	(2.1)	77.3	(2.8)	46.4	(1.7)	56.1	(1.0)	72.2	(1.8)	81.6	(2.5)
	Mexico	76.2	(0.8)	73.9	(0.7)	78.6	(3.1)	c	c	72.5	(1.0)	74.7	(0.7)	80.4	(2.5)	c	c
	Netherlands	34.4	(2.6)	32.7	(1.2)	45.0	(1.9)	61.4	(2.6)	28.2	(3.2)	30.7	(1.2)	44.2	(2.1)	62.2	(2.8)
	New Zealand	39.5	(2.4)	42.5	(1.3)	55.3	(1.6)	66.1	(1.8)	40.2	(2.3)	47.1	(1.5)	62.1	(1.9)	75.2	(2.1)
	Norway	39.9	(2.0)	53.3	(1.2)	72.3	(2.0)	84.1	(3.0)	41.3	(1.8)	56.4	(1.1)	75.8	(1.6)	83.1	(2.5)
	Poland	27.6	(2.0)	33.2	(1.4)	44.0	(1.9)	59.6	(2.7)	31.6	(1.9)	38.3	(1.3)	54.2	(2.2)	68.1	(3.0)
	Portugal	63.7	(1.8)	52.6	(1.1)	64.8	(2.0)	78.8	(3.7)	53.1	(2.0)	51.5	(1.1)	69.2	(2.0)	85.1	(4.0)
	Slovak Republic	42.0	(3.0)	44.1	(1.5)	53.8	(1.9)	61.9	(4.1)	40.5	(2.5)	38.9	(1.3)	45.0	(1.9)	54.2	(3.3)
	Spain	26.4	(1.7)	30.1	(0.9)	51.4	(1.8)	65.9	(2.4)	22.2	(1.3)	32.7	(1.0)	51.0	(1.8)	67.8	(2.7)
	Sweden	30.6	(2.0)	44.0	(1.1)	60.0	(1.8)	75.9	(2.8)	32.3	(2.3)	46.8	(1.2)	61.3	(1.8)	78.7	(2.4)
	Switzerland	44.8	(1.7)	50.8	(1.2)	62.2	(1.7)	69.9	(2.2)	45.1	(1.7)	55.9	(0.9)	68.2	(1.6)	77.4	(1.6)
	Turkey	39.9	(1.5)	49.9	(1.7)	73.4	(3.0)	c	c	42.2	(1.6)	53.2	(1.6)	73.8	(3.1)	c	c
	United Kingdom	42.3	(1.7)	47.6	(1.1)	55.2	(1.4)	68.0	(2.0)	45.1	(1.9)	50.5	(1.2)	60.0	(1.8)	74.4	(1.5)
	United States	48.2	(2.1)	46.7	(1.2)	59.6	(2.1)	71.5	(3.1)	47.6	(2.0)	51.9	(1.3)	66.0	(1.8)	77.0	(2.5)
	OECD average	38.8	(0.4)	43.5	(0.2)	56.6	(0.4)	69.2	(0.5)	37.4	(0.4)	45.3	(0.2)	59.4	(0.4)	72.1	(0.5)
Partners	Argentina	57.0	(1.4)	50.7	(2.0)	57.9	(4.8)	c	c	53.2	(1.6)	51.7	(1.8)	55.3	(4.3)	c	c
	Azerbaijan	68.0	(1.3)	76.5	(1.7)	c	c	c	c	62.6	(1.4)	68.0	(1.9)	c	c	c	c
	Brazil	59.6	(0.8)	54.8	(1.5)	57.6	(4.1)	c	c	60.3	(1.1)	60.5	(1.4)	70.6	(5.1)	c	c
	Bulgaria	55.7	(2.0)	49.6	(1.7)	49.1	(2.9)	64.0	(4.7)	54.3	(1.7)	49.3	(1.5)	54.0	(3.0)	61.9	(4.8)
	Chile	62.7	(1.5)	60.3	(1.4)	66.7	(3.1)	c	c	65.1	(1.5)	63.4	(1.6)	68.9	(3.4)	c	c
	Colombia	81.5	(1.1)	78.2	(1.5)	c	c	c	c	83.5	(1.1)	82.5	(1.7)	c	c	c	c
	Croatia	33.7	(1.9)	36.2	(1.3)	44.6	(2.4)	56.6	(4.5)	35.2	(2.1)	37.7	(1.2)	48.9	(2.0)	63.0	(4.5)
	Estonia	47.4	(4.0)	47.9	(1.6)	57.9	(2.3)	68.2	(2.6)	42.6	(3.7)	45.8	(1.6)	52.9	(2.2)	63.3	(2.6)
	Hong Kong-China	36.1	(3.7)	48.0	(1.6)	62.8	(1.8)	78.2	(1.6)	32.1	(2.5)	47.0	(1.3)	61.4	(1.8)	76.4	(1.8)
	Indonesia	58.8	(1.3)	59.1	(1.6)	c	c	c	c	51.2	(1.3)	61.4	(1.5)	c	c	c	c
	Israel	37.6	(1.7)	42.4	(1.6)	58.0	(2.3)	68.7	(4.0)	37.9	(1.6)	43.3	(1.3)	57.2	(3.2)	63.7	(5.0)
	Jordan	65.3	(1.2)	70.9	(1.2)	83.1	(3.1)	c	c	66.6	(1.3)	75.9	(1.2)	87.1	(3.0)	c	c
	Kyrgyzstan	78.5	(0.9)	67.4	(2.8)	c	c	c	c	77.3	(0.8)	65.2	(2.2)	c	c	c	c
	Latvia	56.4	(2.8)	55.7	(1.3)	63.7	(2.8)	74.5	(4.3)	48.6	(2.2)	45.7	(1.6)	53.0	(2.8)	64.6	(4.5)
	Liechtenstein	44.7	(7.1)	43.5	(3.9)	37.2	(5.3)	51.1	(8.9)	43.8	(9.0)	50.7	(4.2)	56.2	(6.5)	62.3	(10.3)
	Lithuania	47.8	(1.8)	51.4	(1.3)	62.9	(2.4)	75.0	(4.3)	44.4	(1.9)	45.6	(1.3)	57.3	(2.1)	66.2	(3.7)
	Macao-China	35.8	(2.6)	45.5	(1.2)	59.7	(2.4)	75.3	(4.5)	31.2	(2.3)	43.7	(1.1)	57.8	(2.4)	71.1	(3.9)
	Montenegro	53.1	(1.3)	53.7	(1.4)	66.9	(6.3)	c	c	50.5	(1.2)	51.4	(1.4)	64.8	(5.7)	c	c
	Qatar	53.2	(0.7)	60.8	(1.5)	c	c	c	c	50.5	(0.8)	62.0	(1.6)	c	c	c	c
	Romania	52.6	(1.8)	60.3	(1.5)	72.9	(4.0)	c	c	46.1	(1.6)	49.3	(1.5)	53.3	(5.2)	c	c
	Russian Federation	50.0	(2.8)	50.0	(1.5)	54.4	(2.4)	65.2	(4.5)	45.8	(2.4)	45.7	(1.6)	50.3	(2.9)	56.1	(5.1)
	Serbia	44.4	(1.6)	38.9	(1.2)	47.1	(3.7)	c	c	44.8	(1.6)	42.5	(1.2)	54.9	(3.3)	c	c
	Slovenia	32.1	(2.2)	31.6	(1.0)	38.7	(1.7)	54.5	(2.8)	29.8	(2.0)	35.8	(1.2)	47.7	(2.0)	57.8	(2.9)
	Chinese Taipei	32.1	(2.3)	45.0	(1.2)	60.3	(1.2)	71.5	(1.7)	30.4	(2.2)	37.5	(1.1)	55.4	(1.4)	70.2	(1.7)
	Thailand	68.5	(1.3)	70.8	(0.9)	81.0	(3.1)	c	c	72.6	(1.2)	76.9	(1.1)	87.8	(3.2)	c	c
	Tunisia	76.5	(1.1)	83.3	(1.3)	c	c	c	c	59.6	(1.3)	77.2	(1.5)	c	c	c	c
	Uruguay	59.9	(1.5)	57.5	(1.4)	66.1	(2.8)	c	c	60.8	(1.6)	64.4	(1.4)	73.1	(2.8)	c	c

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[Part 2/4]

Table A3.4b General interest in science (underlying percentages), by performance group

		Percentage of students reporting high or medium interest in the following															
		The biology of plants								Human biology							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	27.2	(1.4)	35.8	(0.8)	46.9	(1.1)	54.3	(1.3)	45.5	(1.6)	59.1	(0.9)	70.4	(1.2)	73.8	(1.3)
	Austria	51.7	(2.1)	54.1	(1.3)	58.0	(2.1)	57.5	(2.8)	70.0	(1.9)	75.4	(1.1)	79.6	(1.5)	78.2	(2.0)
	Belgium	36.4	(2.0)	46.5	(1.1)	56.3	(1.4)	63.3	(2.5)	57.6	(2.4)	72.3	(1.1)	80.5	(1.1)	85.5	(1.3)
	Canada	41.0	(1.6)	49.3	(0.9)	53.7	(1.3)	56.7	(1.8)	56.8	(1.9)	67.9	(0.9)	73.9	(1.1)	76.7	(1.3)
	Czech Republic	38.1	(3.0)	39.0	(1.6)	40.9	(2.2)	45.6	(2.7)	62.6	(2.6)	67.1	(1.3)	73.4	(2.1)	76.4	(2.2)
	Denmark	28.0	(2.0)	34.9	(1.1)	44.7	(2.2)	48.8	(3.8)	46.4	(2.1)	58.3	(1.2)	67.7	(2.2)	67.9	(3.6)
	Finland	20.6	(4.1)	26.0	(1.1)	35.2	(1.5)	44.0	(1.8)	53.2	(4.3)	61.7	(1.3)	69.2	(1.5)	72.5	(1.4)
	France	40.3	(2.0)	48.0	(1.3)	60.4	(2.3)	70.9	(2.6)	64.3	(1.8)	75.1	(1.1)	82.9	(1.5)	85.7	(2.3)
	Germany	50.4	(2.1)	55.9	(1.2)	60.9	(1.8)	61.1	(2.9)	67.5	(2.1)	76.8	(1.1)	80.6	(1.4)	80.8	(1.8)
	Greece	52.3	(2.0)	57.4	(1.1)	60.8	(2.6)	61.3	(5.5)	68.1	(1.7)	79.9	(0.9)	85.5	(1.7)	88.0	(3.1)
	Hungary	40.7	(2.8)	42.1	(1.2)	47.2	(2.0)	52.6	(3.8)	63.4	(3.0)	72.7	(1.3)	75.0	(2.0)	77.0	(3.4)
	Iceland	25.9	(1.7)	33.4	(1.2)	47.1	(2.1)	57.6	(4.1)	47.5	(1.8)	61.9	(1.3)	73.5	(2.0)	77.1	(2.8)
	Ireland	39.9	(2.2)	55.2	(1.3)	62.7	(1.7)	62.1	(2.8)	58.8	(2.2)	77.1	(1.0)	85.0	(1.4)	85.6	(2.0)
	Italy	42.4	(1.1)	48.3	(0.9)	53.5	(1.7)	59.3	(2.5)	68.2	(1.3)	75.1	(0.7)	79.0	(1.2)	80.9	(2.5)
	Japan	37.0	(1.9)	56.8	(1.2)	63.9	(1.4)	67.5	(1.6)	44.7	(1.8)	63.1	(1.2)	71.2	(1.4)	74.6	(1.6)
	Korea	26.2	(2.4)	42.1	(1.1)	53.4	(1.7)	56.2	(2.4)	44.1	(2.7)	60.3	(1.1)	68.4	(1.2)	73.2	(2.3)
	Luxembourg	47.0	(1.6)	49.1	(1.1)	51.5	(2.2)	55.0	(4.1)	70.5	(1.5)	75.6	(1.0)	77.0	(1.6)	78.4	(3.0)
	Mexico	74.5	(1.0)	77.1	(0.8)	74.8	(3.1)	c	c	81.6	(0.9)	86.7	(0.6)	83.8	(1.9)	c	c
	Netherlands	36.2	(2.7)	34.5	(1.3)	42.3	(2.1)	51.4	(2.7)	58.6	(3.2)	58.0	(1.4)	67.7	(1.7)	74.2	(2.5)
	New Zealand	37.3	(2.5)	39.4	(1.4)	48.2	(1.8)	53.6	(2.2)	54.7	(2.8)	64.1	(1.4)	69.9	(1.5)	72.2	(2.1)
	Norway	26.7	(1.8)	34.4	(1.0)	47.6	(2.0)	55.3	(3.7)	30.8	(1.8)	45.4	(1.1)	61.3	(2.1)	69.1	(3.2)
	Poland	60.7	(2.0)	57.5	(1.3)	56.0	(1.7)	55.5	(3.5)	71.2	(1.8)	77.2	(0.9)	79.7	(1.6)	81.1	(2.5)
	Portugal	32.0	(1.6)	40.8	(1.2)	51.3	(2.7)	53.8	(5.1)	46.8	(2.1)	63.4	(1.2)	73.7	(2.0)	79.1	(4.0)
	Slovak Republic	42.1	(1.9)	46.6	(1.3)	52.2	(2.8)	52.4	(4.4)	58.4	(1.7)	69.4	(1.2)	75.3	(2.0)	78.7	(2.7)
	Spain	35.3	(2.0)	41.4	(0.9)	44.5	(1.4)	47.5	(2.8)	47.9	(2.1)	59.3	(0.8)	66.2	(1.4)	72.0	(2.3)
	Sweden	26.3	(1.9)	36.0	(1.3)	40.7	(2.1)	49.3	(3.0)	45.8	(2.8)	61.4	(1.2)	65.9	(2.0)	71.0	(3.0)
	Switzerland	26.8	(1.7)	38.1	(1.2)	51.0	(1.6)	57.5	(2.0)	33.6	(1.5)	47.2	(1.2)	62.2	(1.5)	72.3	(2.2)
	Turkey	58.9	(1.2)	66.7	(1.4)	69.0	(4.0)	c	c	71.4	(1.2)	83.3	(1.0)	87.7	(2.2)	c	c
	United Kingdom	39.3	(2.1)	44.9	(1.3)	50.8	(1.7)	56.5	(1.7)	62.2	(1.7)	74.7	(1.0)	81.1	(1.2)	83.7	(1.4)
	United States	47.0	(2.6)	41.8	(1.2)	45.3	(2.3)	52.6	(2.6)	65.2	(2.3)	66.5	(1.2)	70.7	(2.1)	76.7	(2.3)
	OECD average	37.7	(0.4)	43.9	(0.2)	51.0	(0.4)	55.7	(0.6)	55.9	(0.4)	66.6	(0.2)	73.8	(0.3)	77.2	(0.5)
Partners	Argentina	64.3	(1.2)	56.7	(1.7)	55.2	(4.8)	c	c	72.3	(1.2)	74.2	(1.3)	74.0	(4.3)	c	c
	Azerbaijan	70.7	(1.2)	79.9	(1.5)	c	c	c	c	63.1	(1.4)	81.4	(1.5)	c	c	c	c
	Brazil	71.9	(0.9)	68.6	(1.4)	61.7	(4.6)	c	c	76.9	(0.8)	80.0	(1.1)	80.9	(3.1)	c	c
	Bulgaria	42.8	(1.4)	51.8	(1.3)	59.7	(2.3)	55.3	(6.6)	64.7	(1.3)	77.8	(1.0)	81.5	(2.2)	82.0	(4.3)
	Chile	68.1	(1.2)	59.6	(1.2)	55.3	(3.2)	c	c	74.6	(1.1)	76.3	(1.1)	77.3	(2.7)	c	c
	Colombia	89.0	(0.8)	82.4	(1.4)	c	c	c	c	92.7	(0.6)	91.1	(0.9)	c	c	c	c
	Croatia	59.7	(2.4)	55.1	(1.3)	52.0	(1.8)	54.1	(4.0)	73.0	(2.2)	78.2	(1.1)	80.4	(1.8)	81.5	(2.7)
	Estonia	55.6	(3.2)	49.9	(1.4)	46.8	(2.1)	46.4	(2.5)	63.2	(3.8)	68.0	(1.3)	70.3	(1.6)	73.5	(2.4)
	Hong Kong-China	39.6	(2.8)	53.8	(1.2)	59.4	(1.8)	65.2	(2.5)	56.3	(2.5)	71.1	(1.0)	80.0	(1.3)	85.8	(1.5)
	Indonesia	91.3	(0.6)	85.9	(2.8)	c	c	c	c	90.2	(0.6)	90.4	(2.1)	c	c	c	c
	Israel	39.5	(1.7)	40.5	(1.5)	43.3	(3.2)	41.0	(4.3)	59.4	(1.8)	67.5	(1.6)	73.0	(2.4)	76.2	(3.6)
	Jordan	79.7	(0.9)	84.2	(0.8)	83.0	(2.7)	c	c	81.2	(1.1)	90.3	(0.7)	92.9	(2.1)	c	c
	Kyrgyzstan	91.3	(0.5)	82.3	(2.2)	c	c	c	c	93.8	(0.5)	94.0	(1.2)	c	c	c	c
	Latvia	52.7	(2.6)	40.4	(1.5)	38.4	(2.8)	39.1	(5.5)	74.4	(2.4)	70.6	(1.2)	72.8	(2.4)	73.2	(3.6)
	Liechtenstein	30.8	(7.7)	35.3	(3.7)	51.8	(6.0)	59.1	(9.3)	29.7	(7.9)	36.7	(4.3)	61.3	(6.1)	76.4	(8.0)
	Lithuania	60.0	(2.2)	57.5	(1.1)	59.3	(2.2)	59.9	(3.5)	73.0	(1.5)	80.0	(0.9)	81.3	(1.6)	83.5	(3.1)
	Macao-China	49.9	(2.9)	52.7	(1.1)	61.5	(2.1)	60.5	(4.3)	63.5	(2.4)	70.9	(1.0)	80.9	(1.8)	80.2	(4.2)
	Montenegro	66.9	(1.2)	66.9	(1.4)	72.7	(4.9)	c	c	76.5	(1.0)	84.3	(1.0)	90.2	(4.6)	c	c
	Qatar	61.4	(0.7)	67.1	(1.5)	c	c	c	c	68.4	(0.8)	81.8	(1.6)	c	c	c	c
	Romania	64.5	(1.9)	66.6	(2.1)	51.1	(5.6)	c	c	75.1	(1.9)	84.9	(1.3)	83.8	(4.8)	c	c
	Russian Federation	65.5	(1.7)	61.4	(1.7)	54.3	(2.3)	57.3	(3.9)	79.0	(1.4)	79.3	(1.2)	77.3	(2.3)	79.5	(3.1)
	Serbia	68.5	(1.4)	64.8	(1.3)	61.2	(3.9)	c	c	79.7	(1.3)	83.9	(0.9)	84.2	(3.0)	c	c
	Slovenia	43.8	(2.4)	44.3	(1.3)	46.6	(2.0)	52.4	(2.5)	57.4	(2.2)	62.3	(1.1)	67.3	(2.0)	71.3	(2.4)
	Chinese Taipei	38.9	(2.3)	49.8	(1.1)	60.2	(1.2)	67.7	(1.5)	51.4	(2.1)	65.7	(1.2)	73.2	(1.4)	78.0	(1.4)
	Thailand	81.3	(1.2)	84.6	(0.8)	87.7	(2.9)	c	c	83.7	(1.0)	89.5	(0.6)	92.8	(2.3)	c	c
	Tunisia	71.5	(1.1)	76.0	(1.3)	c	c	c	c	84.9	(0.8)	87.3	(1.0)	c	c	c	c
	Uruguay	61.7	(1.8)	52.2	(1.6)	44.9	(3.9)	c	c	78.6	(1.3)	77.1	(1.1)	74.4	(2.9)	c	c

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[Part 3/4]

Table A3.4b General interest in science (underlying percentages), by performance group

		Percentage of students reporting high or medium interest in the following															
		Topics in astronomy								Topics in geology							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	27.3	(1.5)	42.4	(0.8)	55.2	(1.1)	61.4	(1.7)	21.2	(1.3)	27.8	(0.7)	38.4	(1.1)	44.4	(1.4)
	Austria	32.9	(2.1)	49.1	(1.2)	59.7	(1.9)	65.4	(2.6)	31.6	(2.0)	40.3	(1.2)	50.2	(1.9)	54.6	(2.5)
	Belgium	38.7	(2.3)	49.6	(1.0)	63.6	(1.3)	69.2	(2.1)	28.9	(1.7)	38.2	(0.9)	50.3	(1.5)	57.1	(2.3)
	Canada	39.2	(1.9)	54.0	(0.9)	64.6	(1.4)	68.3	(1.5)	31.7	(1.7)	38.1	(0.8)	47.5	(1.3)	53.5	(1.6)
	Czech Republic	39.9	(2.6)	54.9	(1.3)	66.2	(1.9)	71.0	(2.0)	30.5	(2.8)	37.2	(1.1)	39.9	(2.1)	41.0	(2.9)
	Denmark	23.8	(1.9)	37.6	(1.1)	51.4	(2.1)	57.0	(4.2)	21.8	(1.7)	27.3	(1.0)	37.9	(1.8)	44.1	(3.7)
	Finland	33.7	(3.9)	39.7	(1.4)	51.3	(1.5)	62.3	(1.6)	19.0	(3.5)	20.6	(1.3)	36.2	(1.4)	48.1	(1.7)
	France	39.8	(1.5)	54.5	(1.2)	73.2	(1.7)	79.0	(2.6)	34.6	(1.5)	46.2	(1.2)	57.8	(1.7)	66.0	(2.8)
	Germany	39.2	(2.1)	50.3	(1.1)	58.9	(1.9)	61.8	(2.5)	36.6	(1.9)	45.8	(1.3)	56.4	(2.0)	62.1	(2.5)
	Greece	40.1	(1.7)	56.5	(1.1)	68.3	(2.0)	73.0	(4.3)	34.3	(1.6)	40.2	(1.0)	47.7	(3.1)	43.8	(5.8)
	Hungary	45.6	(2.1)	58.1	(1.2)	66.4	(1.8)	69.3	(3.1)	25.8	(2.3)	37.5	(1.2)	48.8	(2.1)	57.3	(3.9)
	Iceland	46.2	(1.9)	59.7	(1.1)	71.4	(1.7)	76.5	(3.1)	28.7	(1.9)	40.1	(1.2)	54.3	(2.1)	60.6	(3.8)
	Ireland	26.5	(1.8)	42.5	(1.1)	61.6	(1.6)	67.4	(2.5)	19.5	(2.0)	30.9	(1.0)	45.2	(1.9)	52.1	(2.8)
	Italy	52.4	(1.1)	67.5	(0.7)	75.3	(1.0)	76.3	(2.0)	40.2	(1.2)	50.6	(0.8)	55.0	(1.3)	56.7	(2.4)
	Japan	30.5	(2.0)	51.3	(1.4)	64.3	(1.8)	70.7	(1.8)	19.8	(2.0)	30.1	(1.3)	37.2	(1.7)	46.2	(1.7)
	Korea	22.9	(2.3)	49.4	(1.1)	63.4	(1.5)	66.1	(2.4)	25.7	(2.0)	39.2	(1.1)	52.1	(1.6)	53.4	(2.5)
	Luxembourg	38.9	(1.7)	48.7	(1.1)	58.3	(1.8)	64.4	(3.2)	37.6	(1.6)	44.9	(1.0)	50.9	(1.8)	55.4	(3.2)
	Mexico	66.2	(1.5)	78.4	(0.9)	80.2	(2.7)	c	c	62.0	(1.4)	68.5	(0.8)	66.7	(3.0)	c	c
	Netherlands	30.3	(3.3)	29.3	(1.3)	41.2	(2.0)	53.3	(2.5)	22.4	(2.8)	20.6	(1.2)	35.0	(1.6)	44.9	(2.0)
	New Zealand	34.9	(2.3)	47.0	(1.3)	56.7	(1.9)	59.9	(1.9)	26.6	(1.9)	31.2	(1.2)	43.5	(1.6)	45.8	(2.3)
	Norway	33.9	(1.9)	52.0	(0.9)	67.3	(2.1)	70.2	(4.0)	27.6	(1.8)	41.8	(1.2)	55.9	(2.1)	64.5	(3.6)
	Poland	37.3	(1.7)	50.8	(1.3)	66.5	(2.1)	74.1	(3.0)	34.1	(1.9)	42.9	(1.2)	50.0	(1.7)	51.6	(3.2)
	Portugal	42.6	(2.0)	54.0	(1.1)	64.0	(2.1)	68.5	(4.4)	35.7	(2.2)	49.3	(1.1)	55.2	(2.5)	52.9	(4.4)
	Slovak Republic	41.3	(1.9)	54.3	(1.3)	65.8	(2.7)	67.9	(4.4)	34.1	(2.2)	44.4	(1.3)	52.3	(2.1)	46.9	(3.0)
	Spain	27.1	(1.6)	43.9	(1.0)	54.6	(1.6)	61.5	(2.4)	25.7	(1.7)	35.1	(0.9)	38.2	(1.7)	35.1	(2.5)
	Sweden	32.2	(2.4)	52.0	(1.3)	64.1	(2.7)	70.5	(3.2)	19.8	(1.9)	32.4	(1.2)	44.6	(1.8)	56.6	(3.0)
	Switzerland	37.8	(1.8)	49.9	(1.2)	59.7	(1.7)	62.3	(2.1)	32.3	(1.5)	43.5	(1.2)	57.1	(1.7)	62.5	(2.4)
	Turkey	47.6	(1.3)	62.3	(1.2)	72.7	(2.5)	c	c	36.8	(1.1)	46.2	(1.3)	53.8	(4.3)	c	c
	United Kingdom	30.8	(1.8)	44.9	(0.9)	60.7	(1.6)	68.1	(2.0)	25.1	(1.7)	30.8	(0.9)	41.5	(1.4)	49.3	(2.0)
	United States	45.9	(1.9)	57.1	(1.1)	69.4	(1.8)	72.2	(2.1)	40.6	(2.6)	40.1	(1.2)	44.3	(1.7)	47.6	(2.6)
	OECD average	36.1	(0.4)	50.0	(0.2)	62.3	(0.3)	67.4	(0.5)	29.0	(0.4)	37.4	(0.2)	47.3	(0.3)	51.9	(0.6)
Partners	Argentina	47.1	(1.4)	58.4	(1.4)	64.7	(5.1)	c	c	44.6	(1.7)	48.4	(1.6)	52.2	(5.8)	c	c
	Azerbaijan	62.2	(1.1)	76.9	(2.0)	c	c	c	c	59.5	(1.2)	67.0	(1.8)	c	c	c	c
	Brazil	52.0	(1.2)	58.7	(1.4)	61.8	(4.9)	c	c	47.6	(1.2)	47.8	(1.5)	50.4	(5.0)	c	c
	Bulgaria	54.2	(1.6)	64.2	(1.4)	71.4	(2.5)	78.8	(4.7)	47.3	(1.4)	50.9	(1.2)	56.1	(2.6)	51.9	(4.2)
	Chile	57.3	(1.3)	64.4	(1.1)	69.8	(2.7)	c	c	47.7	(1.4)	53.6	(1.2)	56.1	(2.8)	c	c
	Colombia	77.7	(1.3)	80.2	(1.5)	c	c	c	c	73.4	(1.3)	72.9	(1.4)	c	c	c	c
	Croatia	43.4	(1.9)	61.7	(0.9)	77.5	(1.8)	79.7	(3.0)	35.1	(1.8)	50.6	(1.1)	61.5	(2.0)	62.6	(4.1)
	Estonia	46.2	(3.3)	60.9	(1.2)	70.9	(1.5)	77.6	(2.1)	35.1	(2.9)	42.8	(1.1)	50.7	(2.1)	51.5	(2.6)
	Hong Kong-China	42.3	(3.3)	58.5	(1.2)	65.9	(1.4)	73.4	(1.8)	29.2	(2.8)	40.7	(1.3)	46.2	(2.3)	49.4	(2.0)
	Indonesia	59.2	(1.2)	74.8	(2.1)	c	c	c	c	49.2	(1.1)	56.7	(1.4)	c	c	c	c
	Israel	39.2	(1.8)	48.0	(1.4)	58.7	(2.6)	64.1	(4.8)	29.5	(1.8)	33.1	(1.3)	36.4	(2.8)	37.0	(4.7)
	Jordan	56.8	(1.2)	64.0	(1.1)	69.8	(3.8)	c	c	53.3	(1.3)	60.7	(1.1)	63.7	(3.8)	c	c
	Kyrgyzstan	73.6	(0.8)	77.8	(1.7)	c	c	c	c	69.1	(0.8)	62.7	(2.2)	c	c	c	c
	Latvia	56.9	(2.3)	68.6	(1.3)	78.8	(1.9)	78.3	(4.1)	38.7	(2.8)	46.1	(1.5)	51.3	(2.7)	54.7	(4.5)
	Liechtenstein	51.0	(10.4)	45.8	(3.9)	52.9	(5.4)	71.6	(9.2)	32.0	(8.5)	41.9	(4.3)	50.9	(6.8)	60.4	(10.6)
	Lithuania	42.9	(1.9)	64.0	(1.1)	80.0	(2.0)	84.9	(3.1)	45.6	(1.9)	52.2	(1.1)	59.6	(2.2)	59.7	(4.7)
	Macao-China	44.9	(3.0)	55.8	(1.1)	68.2	(1.9)	72.7	(3.7)	27.3	(3.0)	32.7	(1.1)	41.0	(2.1)	49.3	(4.2)
	Montenegro	54.7	(1.1)	72.6	(1.2)	83.1	(4.2)	c	c	49.2	(1.4)	60.3	(1.5)	68.0	(5.8)	c	c
	Qatar	55.3	(0.8)	64.6	(1.5)	c	c	c	c	47.8	(0.8)	46.6	(1.6)	c	c	c	c
	Romania	48.6	(2.0)	72.8	(2.0)	83.2	(3.2)	c	c	46.7	(1.9)	59.6	(2.0)	64.8	(4.3)	c	c
	Russian Federation	51.0	(1.7)	66.3	(1.2)	73.9	(2.2)	76.2	(2.7)	40.5	(2.3)	44.3	(1.3)	45.2	(2.5)	46.3	(4.3)
	Serbia	51.4	(1.4)	69.1	(0.9)	82.4	(2.9)	c	c	42.7	(1.4)	47.9	(1.2)	53.4	(3.2)	c	c
	Slovenia	44.6	(1.9)	60.6	(1.1)	69.6	(1.9)	76.2	(2.4)	46.4	(2.8)	55.1	(1.1)	63.5	(2.1)	64.7	(2.8)
	Chinese Taipei	42.1	(1.9)	63.2	(1.0)	71.3	(1.2)	72.8	(1.5)	32.0	(1.9)	44.8	(1.1)	53.6	(1.4)	55.8	(1.6)
	Thailand	73.4	(1.3)	84.1	(1.0)	84.3	(3.1)	c	c	70.7	(1.2)	78.1	(0.9)	76.4	(4.2)	c	c
	Tunisia	59.5	(1.3)	64.5	(1.6)	c	c	c	c	60.4	(1.2)	67.5	(1.4)	c	c	c	c
	Uruguay	56.9	(1.3)	57.3	(1.3)	55.6	(3.7)	c	c	49.1	(1.8)	45.5	(1.5)	38.3	(3.1)	c	c

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[Part 4/4]

Table A3.4b General interest in science (underlying percentages), by performance group

		Percentage of students reporting high or medium interest in the following															
		Ways scientists design experiments								What is required for scientific explanations							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	34.9	(1.6)	34.3	(0.7)	36.7	(1.1)	43.4	(1.3)	21.3	(1.5)	24.3	(0.6)	32.0	(1.1)	43.1	(1.3)
	Austria	42.6	(2.9)	51.4	(1.2)	58.9	(2.1)	65.6	(3.2)	26.2	(1.9)	29.7	(1.2)	39.5	(2.0)	51.4	(4.0)
	Belgium	37.8	(1.7)	46.4	(1.0)	57.8	(1.3)	67.4	(1.8)	30.8	(2.1)	32.1	(0.8)	41.9	(1.4)	52.3	(2.1)
	Canada	42.0	(2.1)	41.8	(0.9)	46.4	(1.3)	52.4	(1.8)	29.7	(1.8)	29.8	(0.8)	34.8	(1.0)	45.3	(1.7)
	Czech Republic	43.0	(2.3)	54.7	(1.3)	57.3	(2.3)	61.3	(2.4)	31.0	(2.1)	33.7	(1.2)	36.1	(2.1)	40.6	(2.6)
	Denmark	29.2	(2.0)	33.4	(1.2)	46.7	(2.5)	61.7	(3.8)	26.4	(1.8)	32.1	(1.2)	47.6	(1.9)	63.9	(3.1)
	Finland	19.5	(3.7)	19.2	(1.2)	24.5	(1.5)	35.8	(1.8)	16.8	(4.1)	19.5	(1.0)	27.8	(1.3)	39.9	(1.6)
	France	36.9	(2.0)	48.0	(1.2)	58.7	(2.0)	68.6	(2.7)	31.4	(1.7)	34.3	(1.2)	47.4	(2.0)	56.5	(2.8)
	Germany	41.9	(2.4)	51.5	(1.3)	60.3	(2.0)	66.0	(2.8)	32.3	(2.2)	38.5	(1.1)	47.2	(1.6)	58.3	(2.8)
	Greece	41.7	(1.9)	46.8	(1.1)	60.3	(2.0)	66.9	(3.9)	38.4	(1.7)	46.9	(1.0)	58.6	(2.3)	67.5	(4.9)
	Hungary	41.6	(2.6)	41.3	(1.1)	44.3	(2.0)	55.1	(4.1)	33.5	(2.9)	35.9	(1.1)	39.0	(2.0)	43.6	(4.3)
	Iceland	28.9	(2.0)	35.8	(1.1)	45.1	(2.2)	57.4	(3.5)	20.2	(1.6)	28.3	(1.0)	41.2	(2.1)	53.4	(3.7)
	Ireland	37.5	(2.3)	38.7	(1.0)	42.6	(1.8)	49.4	(2.9)	24.6	(1.7)	29.6	(1.0)	38.9	(1.8)	50.2	(2.6)
	Italy	57.9	(1.1)	62.5	(0.7)	65.8	(1.3)	70.7	(2.1)	39.1	(1.2)	41.1	(0.9)	46.8	(1.4)	53.4	(2.7)
	Japan	21.5	(2.1)	30.0	(1.3)	37.3	(1.5)	48.8	(2.1)	14.0	(1.6)	18.9	(1.1)	28.9	(1.3)	45.0	(1.8)
	Korea	14.7	(1.8)	19.4	(1.0)	30.3	(1.5)	40.1	(2.5)	14.1	(2.0)	20.5	(1.0)	39.0	(1.7)	54.4	(2.7)
	Luxembourg	50.6	(1.9)	60.7	(1.2)	68.4	(2.0)	74.6	(2.9)	35.4	(1.8)	39.0	(1.2)	48.0	(1.8)	58.0	(3.6)
	Mexico	72.4	(1.0)	75.1	(0.8)	75.9	(2.5)	c	c	64.9	(1.3)	67.4	(1.0)	66.7	(3.6)	c	c
	Netherlands	28.3	(2.9)	25.5	(1.1)	32.5	(1.5)	44.2	(1.9)	24.6	(3.1)	21.3	(1.0)	31.1	(1.4)	45.5	(2.2)
	New Zealand	42.7	(2.2)	36.3	(1.3)	36.7	(1.6)	38.9	(1.9)	24.1	(2.1)	25.0	(1.2)	31.3	(1.5)	42.7	(1.9)
	Norway	47.5	(1.9)	58.6	(0.9)	66.8	(1.9)	72.8	(3.9)	32.5	(1.8)	40.1	(1.1)	53.7	(2.0)	64.9	(3.9)
	Poland	43.9	(2.1)	50.7	(1.1)	56.9	(1.8)	68.2	(2.8)	37.7	(2.0)	33.7	(1.1)	36.4	(2.2)	42.5	(3.3)
	Portugal	50.8	(2.3)	60.7	(1.1)	72.7	(2.0)	80.5	(4.0)	44.3	(2.4)	50.8	(1.1)	60.9	(2.4)	67.8	(5.6)
	Slovak Republic	37.1	(2.7)	46.5	(1.3)	52.7	(1.8)	56.4	(3.4)	28.3	(1.9)	28.3	(1.2)	35.4	(1.9)	42.5	(4.1)
	Spain	31.8	(1.5)	41.2	(0.8)	55.1	(1.4)	65.7	(2.1)	19.5	(1.2)	26.4	(0.8)	39.8	(1.5)	49.2	(2.9)
	Sweden	33.7	(2.2)	42.4	(1.3)	49.4	(1.9)	63.2	(2.7)	22.2	(1.8)	31.6	(1.1)	42.2	(2.0)	58.6	(3.0)
	Switzerland	44.1	(2.2)	50.1	(1.0)	56.2	(1.5)	65.0	(1.9)	34.7	(1.9)	35.0	(0.8)	42.5	(1.3)	55.0	(2.0)
	Turkey	49.8	(1.4)	53.3	(1.5)	64.2	(4.4)	c	c	42.5	(1.3)	48.2	(1.6)	59.0	(4.0)	c	c
	United Kingdom	40.9	(2.2)	40.7	(1.0)	39.8	(1.6)	45.5	(2.0)	30.6	(1.9)	31.9	(1.1)	36.8	(1.3)	48.3	(1.5)
	United States	52.6	(1.9)	43.1	(1.1)	41.4	(1.9)	44.9	(2.4)	40.6	(2.8)	31.1	(1.2)	33.4	(1.8)	37.4	(2.6)
	OECD average	38.4	(0.4)	43.3	(0.2)	50.1	(0.3)	58.2	(0.5)	28.7	(0.4)	31.8	(0.2)	40.6	(0.3)	51.1	(0.6)
Partners	Argentina	57.7	(1.3)	54.4	(1.5)	54.0	(4.5)	c	c	48.1	(1.3)	47.4	(1.8)	47.2	(5.6)	c	c
	Azerbaijan	63.4	(1.3)	69.1	(2.0)	c	c	c	c	58.7	(1.3)	60.8	(2.1)	c	c	c	c
	Brazil	69.6	(1.0)	73.7	(1.3)	74.1	(3.8)	c	c	63.6	(1.0)	63.4	(1.3)	61.8	(4.2)	c	c
	Bulgaria	54.6	(1.5)	65.7	(1.6)	73.2	(3.0)	72.2	(4.1)	47.9	(1.5)	47.0	(1.3)	46.8	(2.3)	47.0	(4.3)
	Chile	52.4	(1.7)	53.1	(1.2)	56.8	(2.3)	c	c	45.2	(1.7)	46.1	(1.2)	53.1	(3.2)	c	c
	Colombia	79.9	(1.1)	77.8	(1.4)	c	c	c	c	75.7	(1.4)	73.7	(1.5)	c	c	c	c
	Croatia	54.8	(2.0)	61.5	(0.9)	62.3	(2.0)	64.3	(3.9)	45.6	(2.2)	50.6	(1.0)	55.3	(1.8)	57.6	(3.6)
	Estonia	59.4	(3.2)	59.8	(1.4)	62.7	(1.9)	68.1	(1.9)	44.9	(3.9)	41.8	(1.3)	43.1	(1.6)	50.1	(2.2)
	Hong Kong-China	41.7	(3.0)	49.3	(1.4)	56.1	(1.8)	63.0	(2.0)	29.8	(3.2)	38.3	(1.5)	48.2	(1.9)	58.6	(2.0)
	Indonesia	79.1	(0.9)	87.3	(1.1)	c	c	c	c	57.5	(1.2)	64.1	(1.9)	c	c	c	c
	Israel	43.8	(1.7)	42.7	(1.4)	47.0	(2.6)	43.1	(4.9)	34.8	(1.6)	33.3	(1.3)	36.8	(2.7)	33.8	(4.0)
	Jordan	63.7	(1.1)	70.4	(1.2)	77.0	(2.9)	c	c	56.2	(1.2)	62.6	(1.3)	72.3	(3.1)	c	c
	Kyrgyzstan	69.5	(0.9)	73.9	(1.8)	c	c	c	c	62.8	(1.0)	57.3	(2.1)	c	c	c	c
	Latvia	66.9	(2.6)	61.6	(1.4)	58.9	(2.2)	62.7	(4.2)	42.6	(2.2)	33.1	(1.2)	31.7	(2.5)	38.9	(5.4)
	Liechtenstein	65.9	(10.4)	56.0	(3.9)	62.9	(5.3)	52.6	(7.8)	40.3	(8.8)	39.4	(3.8)	37.9	(5.1)	44.4	(9.4)
	Lithuania	66.7	(1.6)	74.9	(1.0)	77.6	(1.9)	81.1	(2.8)	47.7	(1.8)	48.9	(1.1)	51.8	(2.1)	54.3	(5.7)
	Macao-China	46.3	(3.0)	51.8	(1.2)	58.1	(2.2)	64.7	(4.7)	27.2	(2.4)	34.2	(1.1)	44.5	(1.8)	54.8	(4.4)
	Montenegro	54.6	(1.3)	62.4	(1.4)	67.3	(6.9)	c	c	55.9	(1.2)	58.2	(1.3)	64.0	(5.9)	c	c
	Qatar	57.2	(0.7)	66.9	(1.7)	c	c	c	c	50.9	(0.7)	55.9	(1.5)	c	c	c	c
	Romania	50.1	(1.9)	59.7	(1.3)	67.0	(4.5)	c	c	47.6	(1.7)	53.2	(1.6)	61.6	(3.8)	c	c
	Russian Federation	68.1	(1.4)	67.8	(1.0)	64.0	(2.2)	62.7	(3.9)	51.9	(2.0)	52.5	(1.4)	52.3	(2.6)	49.8	(4.7)
	Serbia	54.0	(1.6)	62.9	(1.1)	67.4	(2.9)	c	c	49.2	(1.5)	47.9	(1.1)	52.1	(2.8)	c	c
	Slovenia	42.7	(1.9)	50.2	(1.1)	56.0	(2.2)	60.1	(2.8)	37.4	(2.1)	41.5	(1.2)	42.8	(2.0)	48.0	(3.0)
	Chinese Taipei	35.6	(2.1)	46.8	(1.2)	57.5	(1.4)	62.4	(1.7)	30.2	(2.2)	37.0	(1.0)	48.1	(1.3)	55.8	(1.6)
	Thailand	79.8	(1.0)	82.5	(0.8)	81.2	(3.3)	c	c	71.5	(1.3)	73.5	(1.1)	77.0	(4.2)	c	c
	Tunisia	69.0	(1.1)	77.1	(1.5)	c	c	c	c	59.2	(1.1)	71.6	(1.8)	c	c	c	c
	Uruguay	54.8	(1.6)	52.2	(1.4)	57.6	(3.5)	c	c	49.1	(1.7)	47.5	(1.4)	52.7	(3.3)	c	c



[Part 1/1]

Table A3.5a Enjoyment of science (mean index), by performance group

		Index of enjoyment of science										Correlation between the index of enjoyment of science and the index of students' science-related activities	
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers			
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.	Correl.	SE
OECD	Australia	-0.70	(0.04)	-0.30	(0.02)	0.23	(0.02)	0.68	(0.03)	**-0.45**	(0.04)	0.60	(0.01)
	Austria	-0.55	(0.06)	-0.39	(0.03)	0.10	(0.04)	0.48	(0.07)	**-0.38**	(0.09)	0.66	(0.01)
	Belgium	-0.37	(0.07)	-0.15	(0.02)	0.24	(0.03)	0.64	(0.03)	**-0.39**	(0.04)	0.59	(0.01)
	Canada	-0.33	(0.04)	-0.06	(0.02)	0.39	(0.03)	0.85	(0.03)	**-0.46**	(0.04)	0.59	(0.01)
	Czech Republic	-0.28	(0.05)	-0.12	(0.03)	0.05	(0.04)	0.32	(0.05)	**-0.27**	(0.05)	0.62	(0.01)
	Denmark	-0.43	(0.04)	-0.19	(0.02)	0.31	(0.04)	0.70	(0.08)	**-0.39**	(0.10)	0.62	(0.01)
	Finland	-0.48	(0.11)	-0.11	(0.02)	0.21	(0.03)	0.54	(0.03)	**-0.33**	(0.04)	0.58	(0.01)
	France	-0.20	(0.05)	0.01	(0.03)	0.49	(0.03)	0.92	(0.05)	**-0.43**	(0.06)	0.59	(0.01)
	Germany	-0.55	(0.06)	-0.25	(0.03)	0.16	(0.04)	0.65	(0.05)	**-0.49**	(0.06)	0.63	(0.01)
	Greece	-0.20	(0.03)	0.05	(0.02)	0.51	(0.05)	0.81	(0.11)	**-0.30**	(0.12)	0.60	(0.01)
	Hungary	-0.10	(0.05)	0.12	(0.02)	0.42	(0.04)	0.74	(0.07)	**-0.33**	(0.08)	0.62	(0.01)
	Iceland	-0.74	(0.04)	-0.10	(0.02)	0.58	(0.04)	0.99	(0.06)	**-0.41**	(0.08)	0.63	(0.01)
	Ireland	-0.77	(0.04)	-0.31	(0.03)	0.21	(0.04)	0.61	(0.05)	**-0.39**	(0.06)	0.60	(0.01)
	Israel	-0.31	(0.05)	-0.05	(0.04)	0.40	(0.06)	0.65	(0.10)	**-0.25**	(0.13)	0.56	(0.01)
	Japan	-0.81	(0.05)	-0.45	(0.03)	-0.05	(0.03)	0.38	(0.03)	**-0.43**	(0.05)	0.60	(0.01)
	Korea	-0.76	(0.04)	-0.37	(0.02)	0.18	(0.04)	0.62	(0.06)	**-0.44**	(0.05)	0.57	(0.01)
	Luxembourg	-0.38	(0.04)	-0.11	(0.02)	0.35	(0.04)	0.78	(0.08)	**-0.43**	(0.09)	0.59	(0.01)
	Mexico	0.62	(0.02)	0.64	(0.02)	0.86	(0.05)	c	c	c	c	0.46	(0.02)
	Netherlands	-0.51	(0.05)	-0.54	(0.02)	-0.14	(0.03)	0.29	(0.04)	**-0.44**	(0.04)	0.60	(0.01)
	New Zealand	-0.44	(0.04)	-0.24	(0.03)	0.20	(0.03)	0.63	(0.04)	**-0.44**	(0.05)	0.60	(0.01)
	Norway	-0.54	(0.04)	-0.07	(0.03)	0.50	(0.04)	0.91	(0.06)	**-0.41**	(0.08)	0.58	(0.01)
	Poland	-0.35	(0.04)	-0.34	(0.02)	-0.09	(0.04)	0.27	(0.06)	**-0.36**	(0.07)	0.44	(0.01)
	Portugal	0.07	(0.04)	0.30	(0.02)	0.62	(0.03)	0.97	(0.06)	**-0.34**	(0.07)	0.59	(0.01)
	Slovak Republic	-0.17	(0.05)	-0.04	(0.02)	0.15	(0.04)	0.33	(0.06)	**-0.18**	(0.07)	0.60	(0.01)
	Spain	-0.54	(0.03)	-0.20	(0.02)	0.29	(0.03)	0.69	(0.05)	**-0.40**	(0.06)	0.57	(0.01)
	Sweden	-0.63	(0.06)	-0.20	(0.02)	0.24	(0.04)	0.72	(0.05)	**-0.48**	(0.07)	0.57	(0.01)
	Switzerland	-0.48	(0.03)	-0.24	(0.02)	0.25	(0.04)	0.73	(0.05)	**-0.48**	(0.08)	0.59	(0.01)
	Turkey	0.21	(0.03)	0.53	(0.03)	1.02	(0.06)	c	c	c	c	0.63	(0.01)
	United Kingdom	-0.49	(0.04)	-0.23	(0.02)	0.14	(0.03)	0.57	(0.04)	**-0.42**	(0.05)	0.57	(0.01)
	United States	-0.28	(0.05)	-0.16	(0.02)	0.29	(0.04)	0.68	(0.06)	**-0.39**	(0.06)	0.57	(0.01)
	OECD average	-0.44	(0.01)	-0.17	(0.00)	0.26	(0.01)	0.65	(0.01)	**-0.39**	(0.01)	0.59	(0.00)
Partners	Argentina	0.04	(0.03)	-0.01	(0.03)	0.11	(0.10)	c	c	c	c	0.57	(0.01)
	Azerbaijan	0.75	(0.03)	0.77	(0.03)	c	c	c	c	c	c	0.39	(0.02)
	Brazil	0.38	(0.02)	0.37	(0.03)	0.58	(0.08)	c	c	c	c	0.50	(0.01)
	Bulgaria	0.32	(0.03)	0.41	(0.02)	0.50	(0.04)	0.70	(0.08)	-0.20	(0.10)	0.48	(0.02)
	Chile	0.14	(0.03)	0.26	(0.03)	0.65	(0.06)	c	c	c	c	0.56	(0.01)
	Colombia	0.83	(0.02)	0.77	(0.03)	c	c	c	c	c	c	0.46	(0.02)
	Croatia	-0.06	(0.04)	0.08	(0.02)	0.24	(0.04)	0.43	(0.08)	**-0.19**	(0.08)	0.60	(0.01)
	Estonia	-0.23	(0.07)	-0.08	(0.02)	0.13	(0.04)	0.38	(0.05)	**-0.25**	(0.06)	0.57	(0.01)
	Hong Kong-China	-0.18	(0.05)	0.20	(0.02)	0.55	(0.03)	0.87	(0.03)	**-0.32**	(0.04)	0.60	(0.01)
	Indonesia	0.74	(0.02)	0.81	(0.04)	c	c	c	c	c	c	0.32	(0.02)
	Italy	-0.08	(0.02)	0.10	(0.01)	0.37	(0.02)	0.65	(0.05)	**-0.28**	(0.05)	0.61	(0.01)
	Jordan	0.67	(0.02)	0.87	(0.03)	1.16	(0.06)	c	c	c	c	0.42	(0.01)
	Kyrgyzstan	0.99	(0.01)	0.63	(0.04)	c	c	c	c	c	c	0.48	(0.01)
	Latvia	-0.04	(0.03)	-0.03	(0.02)	0.09	(0.04)	0.26	(0.07)	**-0.17**	(0.08)	0.54	(0.01)
	Liechtenstein	-0.84	(0.13)	-0.32	(0.08)	-0.03	(0.12)	0.41	(0.21)	-0.44	(0.25)	0.61	(0.04)
	Lithuania	0.03	(0.03)	0.17	(0.02)	0.41	(0.04)	0.68	(0.07)	**-0.27**	(0.09)	0.49	(0.01)
	Macao-China	0.07	(0.04)	0.34	(0.02)	0.67	(0.03)	0.86	(0.09)	**-0.19**	(0.10)	0.57	(0.01)
	Montenegro	0.32	(0.03)	0.20	(0.03)	0.32	(0.11)	c	c	c	c	0.52	(0.02)
	Qatar	0.29	(0.02)	0.68	(0.03)	c	c	c	c	c	c	0.51	(0.01)
	Romania	0.40	(0.03)	0.49	(0.02)	0.64	(0.08)	c	c	c	c	0.47	(0.03)
	Russian Federation	0.03	(0.04)	0.12	(0.02)	0.23	(0.03)	0.38	(0.07)	-0.15	(0.08)	0.53	(0.01)
	Serbia	0.18	(0.03)	0.00	(0.03)	0.08	(0.06)	c	c	c	c	0.49	(0.01)
	Slovenia	-0.27	(0.04)	-0.22	(0.02)	-0.05	(0.04)	0.20	(0.06)	**-0.26**	(0.07)	0.59	(0.01)
	Chinese Taipei	-0.16	(0.04)	0.00	(0.02)	0.35	(0.02)	0.61	(0.03)	**-0.27**	(0.03)	0.57	(0.01)
	Thailand	0.62	(0.02)	0.80	(0.02)	1.11	(0.05)	c	c	c	c	0.49	(0.01)
	Tunisia	0.93	(0.02)	1.14	(0.03)	c	c	c	c	c	c	0.35	(0.02)
	Uruguay	0.08	(0.03)	0.05	(0.02)	0.28	(0.07)	c	c	c	c	0.53	(0.01)

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/3]

Table A3.5b Enjoyment of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I generally have fun when I am learning science topics								I like reading about science							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	35.9	(1.6)	50.4	(0.9)	69.6	(1.3)	83.5	(1.3)	21.2	(1.4)	34.1	(0.9)	55.6	(1.5)	72.3	(1.6)
	Austria	47.5	(2.3)	52.9	(1.3)	67.9	(1.6)	78.6	(2.3)	30.8	(2.1)	35.7	(1.3)	51.8	(1.9)	64.5	(3.1)
	Belgium	53.4	(3.2)	56.2	(1.2)	68.8	(1.4)	80.5	(2.1)	29.6	(2.0)	38.8	(1.0)	56.9	(1.6)	74.4	(1.9)
	Canada	54.6	(2.0)	66.7	(1.0)	81.6	(1.3)	91.8	(0.8)	36.7	(1.8)	44.4	(1.2)	62.7	(1.3)	78.1	(1.5)
	Czech Republic	48.4	(2.8)	56.7	(1.6)	64.7	(2.5)	74.1	(2.4)	35.8	(2.1)	43.0	(1.4)	54.0	(2.0)	66.9	(2.3)
	Denmark	49.2	(1.8)	59.7	(1.2)	79.3	(1.7)	86.4	(2.4)	32.6	(1.9)	43.9	(1.2)	63.6	(2.1)	76.7	(3.7)
	Finland	43.7	(5.0)	59.5	(1.2)	73.1	(1.5)	82.2	(1.8)	32.9	(4.5)	48.1	(1.2)	65.2	(1.6)	79.2	(1.8)
	France	64.6	(2.3)	69.8	(1.2)	82.1	(1.3)	91.8	(1.5)	35.7	(1.9)	43.2	(1.2)	62.0	(1.9)	77.9	(2.7)
	Germany	44.9	(2.7)	58.0	(1.3)	73.5	(2.0)	86.6	(2.0)	28.8	(2.0)	36.5	(1.2)	49.9	(1.7)	66.3	(2.1)
	Greece	50.8	(1.9)	61.9	(1.3)	78.2	(2.2)	86.4	(4.6)	48.4	(2.0)	57.8	(1.2)	74.8	(2.2)	84.3	(4.0)
	Hungary	61.7	(2.4)	73.5	(1.0)	84.9	(1.5)	92.5	(1.8)	49.4	(2.8)	58.3	(1.0)	68.9	(1.8)	82.4	(2.6)
	Iceland	33.2	(1.9)	57.8	(1.1)	81.6	(1.8)	90.8	(2.3)	29.3	(1.6)	50.5	(1.2)	74.2	(2.2)	85.8	(2.7)
	Ireland	28.4	(2.0)	42.5	(1.3)	63.5	(1.9)	75.6	(2.5)	23.5	(1.8)	39.1	(1.3)	60.8	(2.0)	73.9	(2.4)
	Italy	55.9	(1.4)	59.6	(0.8)	70.3	(1.6)	79.0	(2.7)	46.8	(1.2)	58.2	(0.8)	72.3	(1.3)	81.9	(1.9)
	Japan	33.4	(2.3)	44.2	(1.5)	59.2	(1.7)	73.4	(1.8)	19.6	(1.6)	28.1	(1.2)	43.6	(1.8)	59.8	(1.5)
	Korea	35.6	(2.2)	47.9	(1.2)	69.7	(1.7)	83.0	(2.2)	23.6	(2.1)	38.2	(1.3)	58.0	(1.8)	72.1	(2.2)
	Luxembourg	55.8	(1.8)	64.9	(1.1)	78.4	(1.8)	87.8	(2.8)	36.6	(1.8)	45.5	(1.0)	61.2	(1.7)	76.6	(4.1)
	Mexico	93.5	(0.5)	95.4	(0.4)	97.5	(1.0)	c	c	81.1	(1.0)	81.6	(0.9)	88.6	(1.9)	c	c
	Netherlands	48.7	(2.9)	37.6	(1.4)	50.9	(1.8)	66.6	(2.1)	27.6	(2.8)	29.7	(1.3)	52.0	(2.2)	71.9	(1.9)
	New Zealand	47.9	(2.5)	53.2	(1.3)	69.3	(1.9)	82.6	(1.7)	26.4	(1.9)	32.9	(1.4)	50.0	(1.7)	69.9	(2.0)
	Norway	43.8	(1.8)	62.2	(1.0)	83.3	(1.4)	92.0	(1.9)	29.8	(1.6)	45.2	(1.1)	67.2	(1.8)	79.3	(3.1)
	Poland	40.7	(1.9)	40.0	(1.3)	50.9	(1.9)	64.5	(2.7)	39.5	(1.9)	42.8	(1.2)	57.5	(2.1)	72.3	(2.9)
	Portugal	66.6	(2.0)	72.8	(1.1)	80.5	(2.1)	86.6	(2.5)	51.2	(1.8)	66.4	(1.0)	82.6	(2.0)	92.0	(2.0)
	Slovak Republic	61.7	(2.1)	69.7	(1.2)	76.7	(1.9)	82.5	(2.8)	44.5	(3.1)	49.3	(1.2)	58.8	(2.3)	66.6	(4.3)
	Spain	43.8	(1.5)	56.1	(0.8)	76.2	(1.2)	86.7	(1.9)	30.1	(1.6)	42.0	(0.9)	60.4	(1.5)	75.5	(2.4)
	Sweden	41.4	(2.5)	58.0	(1.1)	75.5	(1.7)	89.5	(2.0)	29.6	(2.3)	45.7	(1.1)	61.7	(2.0)	82.6	(2.1)
	Switzerland	53.5	(1.7)	60.9	(1.0)	77.7	(1.5)	88.8	(1.5)	31.6	(1.7)	37.4	(1.0)	56.0	(1.8)	73.4	(2.2)
	Turkey	72.7	(1.5)	82.4	(1.0)	94.6	(1.6)	c	c	68.8	(1.5)	78.8	(1.1)	91.2	(2.0)	c	c
	United Kingdom	38.1	(2.0)	49.5	(1.2)	65.1	(1.6)	78.2	(1.8)	23.5	(1.9)	30.6	(1.2)	47.1	(1.9)	65.9	(1.8)
	United States	52.2	(2.0)	57.5	(1.3)	74.4	(1.8)	86.0	(2.0)	41.1	(2.3)	41.1	(1.2)	56.0	(2.3)	72.4	(2.6)
	OECD average	47.7	(0.4)	57.1	(0.2)	72.4	(0.3)	83.1	(0.4)	33.4	(0.4)	43.1	(0.2)	60.2	(0.4)	74.8	(0.5)
Partners	Argentina	53.9	(1.5)	50.4	(1.5)	50.7	(4.9)	c	c	58.1	(1.6)	57.3	(1.8)	64.2	(5.1)	c	c
	Azerbaijan	85.6	(0.9)	85.5	(1.4)	c	c	c	c	82.5	(0.9)	82.6	(1.5)	c	c	c	c
	Brazil	72.0	(0.9)	72.0	(1.5)	79.3	(4.2)	c	c	64.3	(1.1)	69.8	(1.2)	82.3	(3.5)	c	c
	Bulgaria	76.9	(1.4)	81.2	(1.3)	84.7	(2.1)	83.7	(3.9)	69.2	(1.7)	77.1	(1.2)	82.1	(2.4)	84.8	(4.0)
	Chile	73.9	(1.3)	77.8	(1.2)	84.8	(2.2)	c	c	49.7	(1.4)	58.2	(1.3)	72.0	(3.7)	c	c
	Colombia	89.2	(1.0)	88.8	(1.5)	c	c	c	c	85.2	(0.9)	84.0	(1.3)	c	c	c	c
	Croatia	51.1	(1.9)	63.3	(1.0)	69.8	(1.8)	74.8	(3.5)	59.1	(2.1)	67.3	(1.1)	74.2	(1.8)	79.5	(3.7)
	Estonia	43.4	(3.4)	59.3	(1.2)	68.5	(1.7)	76.7	(2.3)	39.5	(4.0)	45.6	(1.1)	53.7	(1.7)	66.3	(2.3)
	Hong Kong-China	61.2	(2.7)	76.4	(1.1)	86.1	(1.1)	94.7	(1.0)	41.4	(3.0)	57.8	(1.6)	72.7	(1.4)	84.4	(1.5)
	Indonesia	89.6	(0.7)	91.0	(1.0)	c	c	c	c	89.5	(0.6)	90.1	(1.6)	c	c	c	c
	Israel	50.0	(1.6)	57.8	(1.4)	72.0	(2.3)	82.1	(3.2)	42.5	(1.7)	50.6	(1.5)	63.7	(2.5)	73.0	(3.8)
	Jordan	86.8	(0.9)	90.4	(0.9)	94.2	(1.4)	c	c	78.9	(0.9)	82.2	(1.1)	88.4	(2.2)	c	c
	Kyrgyzstan	92.6	(0.5)	81.1	(1.8)	c	c	c	c	90.5	(0.5)	76.1	(1.9)	c	c	c	c
	Latvia	72.2	(2.0)	71.0	(1.1)	76.0	(1.9)	79.9	(4.7)	48.3	(2.7)	54.8	(1.5)	63.7	(2.7)	69.8	(4.7)
	Liechtenstein	40.7	(7.4)	55.7	(3.7)	63.4	(6.1)	74.7	(7.5)	13.0	(6.0)	33.0	(3.6)	43.4	(6.1)	60.7	(8.4)
	Lithuania	62.5	(1.8)	71.7	(1.1)	78.6	(1.7)	84.5	(3.0)	51.1	(1.9)	58.5	(1.2)	68.8	(1.9)	75.9	(3.9)
	Macao-China	69.9	(2.3)	79.7	(0.9)	89.1	(1.5)	90.7	(3.8)	57.5	(2.8)	68.8	(1.0)	82.5	(1.5)	88.2	(3.7)
	Montenegro	63.4	(1.4)	56.2	(1.6)	57.3	(5.9)	c	c	68.8	(1.4)	65.8	(1.5)	80.2	(4.6)	c	c
	Qatar	73.9	(0.6)	85.1	(1.2)	c	c	c	c	66.8	(0.7)	76.8	(1.3)	c	c	c	c
	Romania	81.6	(1.4)	89.6	(1.1)	92.8	(2.4)	c	c	76.4	(1.1)	82.3	(0.9)	85.0	(3.4)	c	c
	Russian Federation	61.9	(2.0)	68.0	(1.2)	73.2	(1.7)	74.4	(3.0)	50.6	(2.3)	51.3	(1.4)	53.9	(2.1)	61.1	(3.9)
	Serbia	70.9	(1.5)	59.0	(1.5)	57.8	(3.0)	c	c	56.6	(1.6)	52.3	(1.3)	59.2	(3.1)	c	c
	Slovenia	57.2	(2.0)	56.0	(1.1)	56.7	(2.0)	61.7	(2.7)	42.3	(2.2)	48.1	(1.2)	56.4	(2.1)	67.7	(2.6)
	Chinese Taipei	57.9	(2.4)	59.2	(1.0)	70.2	(1.0)	79.4	(1.2)	45.8	(2.6)	54.7	(1.0)	70.8	(1.1)	80.8	(1.1)
	Thailand	89.4	(0.8)	93.0	(0.6)	94.7	(2.4)	c	c	81.9	(1.0)	86.8	(0.9)	94.5	(2.2)	c	c
	Tunisia	86.2	(0.8)	89.2	(1.1)	c	c	c	c	83.2	(0.9)	88.0	(1.1)	c	c	c	c
	Uruguay	58.9	(1.7)	61.1	(1.4)	67.4	(3.8)	c	c	59.9	(1.6)	60.8	(1.3)	66.4	(3.8)	c	c

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[Part 2/3]

Table A3.5b Enjoyment of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I am happy doing science problems								I enjoy acquiring new knowledge in science							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	27.8	(1.5)	40.1	(0.8)	61.9	(1.2)	77.0	(1.2)	38.9	(1.6)	59.5	(0.9)	80.4	(1.1)	91.6	(1.0)
	Austria	31.4	(2.3)	32.3	(1.2)	47.9	(1.6)	60.2	(2.3)	37.9	(2.1)	45.5	(1.3)	62.9	(1.7)	73.7	(2.8)
	Belgium	38.0	(3.0)	46.6	(1.2)	66.0	(1.5)	77.5	(2.2)	51.2	(3.0)	58.9	(1.0)	73.3	(1.2)	84.1	(1.5)
	Canada	32.0	(1.9)	40.3	(0.9)	57.4	(1.4)	74.7	(1.5)	54.4	(1.8)	65.8	(1.1)	82.5	(1.3)	92.2	(1.0)
	Czech Republic	30.0	(2.7)	34.1	(1.3)	38.3	(2.2)	51.6	(2.7)	58.2	(2.7)	68.0	(1.5)	77.0	(1.8)	85.4	(1.9)
	Denmark	27.9	(1.7)	32.3	(1.1)	50.8	(2.2)	65.2	(3.1)	42.7	(1.9)	50.2	(1.2)	70.3	(1.9)	82.2	(3.2)
	Finland	33.6	(4.7)	43.4	(1.3)	54.0	(1.6)	64.3	(1.8)	47.4	(4.9)	64.4	(1.2)	79.4	(1.5)	89.0	(1.5)
	France	31.1	(1.9)	35.6	(1.1)	57.5	(1.7)	75.6	(2.8)	63.3	(2.1)	71.9	(1.2)	84.7	(1.3)	94.1	(1.5)
	Germany	27.8	(1.7)	31.1	(1.0)	44.5	(1.6)	63.8	(2.5)	33.6	(2.4)	46.7	(1.3)	62.7	(1.7)	76.4	(2.0)
	Greece	30.8	(1.7)	37.2	(1.2)	57.0	(2.5)	69.9	(5.0)	59.8	(1.9)	71.1	(1.2)	82.8	(1.9)	86.8	(3.5)
	Hungary	40.9	(2.3)	43.8	(1.2)	52.1	(1.9)	63.2	(3.6)	54.9	(2.8)	69.4	(1.1)	81.7	(1.5)	91.2	(2.2)
	Iceland	24.0	(1.5)	41.7	(1.3)	64.9	(2.4)	79.9	(3.4)	38.0	(1.7)	65.3	(1.0)	87.8	(1.6)	93.5	(2.1)
	Ireland	23.2	(1.7)	31.9	(1.2)	54.2	(1.9)	72.7	(2.4)	42.3	(2.2)	65.0	(1.1)	82.8	(1.4)	90.9	(2.1)
	Italy	50.1	(1.1)	55.7	(0.7)	66.7	(1.4)	76.7	(2.0)	64.6	(1.4)	72.9	(0.8)	80.9	(1.1)	87.2	(1.8)
	Japan	17.1	(1.8)	22.9	(1.2)	34.4	(1.5)	49.7	(1.9)	34.2	(2.3)	50.8	(1.4)	67.3	(1.7)	81.8	(1.5)
	Korea	10.2	(1.6)	20.3	(1.1)	38.7	(1.7)	55.0	(3.2)	44.4	(2.2)	65.1	(1.0)	81.1	(1.3)	91.5	(1.4)
	Luxembourg	32.3	(1.7)	38.1	(1.1)	56.6	(1.9)	70.3	(3.5)	44.7	(1.8)	56.2	(1.1)	73.4	(1.6)	85.5	(2.4)
	Mexico	62.0	(1.3)	56.5	(1.1)	65.3	(3.0)	c	c	90.1	(0.6)	93.4	(0.5)	97.7	(1.1)	c	c
	Netherlands	27.7	(2.1)	24.5	(1.1)	39.1	(1.8)	56.3	(2.3)	42.2	(2.7)	46.1	(1.2)	66.0	(1.4)	82.9	(1.7)
	New Zealand	38.1	(2.0)	45.0	(1.4)	63.2	(1.8)	80.2	(1.7)	49.2	(2.2)	63.9	(1.4)	81.5	(1.4)	91.7	(1.2)
	Norway	30.8	(2.0)	44.0	(1.3)	64.9	(2.4)	78.6	(3.3)	47.5	(2.1)	67.8	(1.1)	86.1	(1.5)	94.1	(1.6)
	Poland	33.3	(2.1)	32.9	(1.3)	43.9	(2.1)	56.9	(3.2)	54.9	(2.2)	56.9	(1.1)	66.3	(1.9)	78.9	(2.6)
	Portugal	44.5	(2.2)	50.5	(1.2)	66.7	(2.6)	84.0	(3.2)	76.7	(1.8)	89.0	(0.7)	95.6	(1.0)	97.6	(1.3)
	Slovak Republic	28.7	(2.3)	31.5	(1.4)	40.0	(2.5)	49.2	(3.5)	58.6	(2.2)	71.5	(1.1)	77.6	(1.8)	82.3	(2.5)
	Spain	14.5	(1.4)	23.5	(1.0)	44.8	(2.1)	61.6	(3.4)	42.7	(1.6)	62.8	(0.9)	80.1	(1.1)	89.8	(1.9)
	Sweden	19.3	(1.8)	30.3	(1.0)	43.2	(2.1)	63.7	(3.1)	37.9	(2.3)	58.7	(1.1)	74.7	(1.5)	88.2	(2.0)
	Switzerland	29.2	(1.6)	35.2	(0.9)	52.1	(1.6)	68.9	(2.7)	42.9	(1.7)	54.9	(1.0)	72.7	(1.6)	84.9	(2.1)
	Turkey	47.1	(1.7)	55.7	(1.6)	78.6	(2.5)	c	c	71.3	(1.5)	81.6	(1.0)	93.0	(1.6)	c	c
	United Kingdom	37.7	(2.2)	46.9	(1.2)	62.0	(1.5)	78.7	(1.4)	48.9	(2.1)	63.6	(1.2)	80.2	(1.5)	90.6	(1.2)
	United States	33.7	(1.7)	35.6	(1.1)	53.7	(2.3)	67.2	(2.9)	54.1	(1.5)	63.4	(1.1)	82.2	(1.6)	91.0	(1.8)
	OECD average	30.2	(0.4)	36.7	(0.2)	52.7	(0.4)	67.6	(0.5)	48.8	(0.4)	62.3	(0.2)	77.6	(0.3)	87.5	(0.4)
Partners	Argentina	37.9	(1.4)	30.3	(1.6)	36.1	(5.4)	c	c	69.1	(1.4)	74.6	(1.4)	79.2	(3.7)	c	c
	Azerbaijan	67.3	(1.3)	69.7	(1.6)	c	c	c	c	84.8	(0.9)	88.8	(1.0)	c	c	c	c
	Brazil	50.1	(1.3)	41.9	(1.7)	48.4	(5.7)	c	c	84.0	(0.8)	87.3	(1.1)	94.5	(2.2)	c	c
	Bulgaria	48.7	(1.7)	44.6	(1.5)	43.7	(2.7)	57.2	(5.2)	81.1	(1.4)	87.5	(0.9)	91.8	(1.6)	94.6	(1.9)
	Chile	42.2	(1.5)	45.1	(1.4)	59.4	(2.9)	c	c	70.7	(1.3)	75.5	(1.2)	84.4	(2.1)	c	c
	Colombia	72.8	(1.5)	68.5	(1.9)	c	c	c	c	90.2	(1.1)	90.7	(1.0)	c	c	c	c
	Croatia	39.3	(2.0)	37.1	(1.2)	40.4	(2.2)	49.8	(3.9)	69.8	(1.9)	78.0	(1.0)	84.4	(1.8)	86.6	(3.2)
	Estonia	39.6	(3.5)	36.4	(1.0)	42.6	(1.9)	54.5	(2.4)	70.1	(3.0)	75.8	(1.0)	81.5	(1.4)	89.8	(1.5)
	Hong Kong-China	39.0	(3.0)	48.2	(1.5)	59.4	(1.7)	70.8	(2.1)	58.9	(3.1)	80.9	(1.0)	91.7	(0.8)	96.9	(0.9)
	Indonesia	78.3	(1.2)	74.1	(2.2)	c	c	c	c	95.1	(0.4)	97.0	(0.7)	c	c	c	c
	Israel	37.1	(1.6)	40.0	(1.5)	52.1	(2.7)	60.2	(4.7)	55.8	(1.5)	67.8	(1.4)	81.7	(2.5)	87.8	(2.9)
	Jordan	75.6	(1.1)	80.4	(1.1)	88.9	(2.4)	c	c	83.1	(1.0)	90.5	(0.8)	95.4	(1.4)	c	c
	Kyrgyzstan	77.4	(0.7)	67.3	(2.5)	c	c	c	c	92.4	(0.5)	91.8	(1.3)	c	c	c	c
	Latvia	31.9	(2.6)	24.8	(1.2)	25.5	(2.3)	32.7	(4.5)	75.4	(2.5)	80.7	(0.9)	84.4	(2.1)	86.6	(3.0)
	Liechtenstein	11.6	(5.6)	35.8	(3.8)	46.5	(6.4)	60.6	(8.7)	15.8	(6.7)	44.0	(3.6)	60.0	(5.8)	73.8	(7.7)
	Lithuania	37.6	(2.0)	36.3	(1.1)	47.4	(2.5)	56.3	(3.9)	76.7	(1.8)	86.1	(0.9)	92.1	(1.2)	96.2	(1.5)
	Macao-China	48.7	(3.2)	53.3	(1.2)	64.2	(1.7)	73.3	(4.6)	71.0	(2.5)	85.4	(0.9)	93.6	(0.9)	98.0	(1.5)
	Montenegro	55.3	(1.5)	49.4	(1.4)	59.4	(5.9)	c	c	81.1	(1.3)	77.8	(1.4)	85.6	(4.1)	c	c
	Qatar	54.8	(0.8)	65.2	(1.5)	c	c	c	c	73.9	(0.7)	88.1	(1.1)	c	c	c	c
	Romania	55.6	(2.2)	50.1	(1.7)	52.7	(4.7)	c	c	81.5	(1.2)	90.1	(1.2)	92.7	(1.8)	c	c
	Russian Federation	48.7	(2.2)	51.7	(1.2)	52.1	(1.6)	53.5	(4.3)	75.3	(1.5)	83.5	(0.9)	89.0	(1.3)	90.8	(2.4)
	Serbia	47.4	(1.4)	35.7	(1.2)	40.9	(3.5)	c	c	71.9	(1.3)	68.2	(1.2)	70.9	(3.1)	c	c
	Slovenia	41.1	(2.1)	42.1	(1.0)	44.9	(2.0)	52.0	(2.6)	52.0	(2.2)	54.4	(1.2)	62.1	(1.8)	70.1	(2.5)
	Chinese Taipei	38.5	(2.2)	37.5	(1.0)	47.6	(1.4)	55.6	(1.8)	59.9	(1.9)	74.3	(0.9)	88.5	(0.9)	94.1	(0.9)
	Thailand	73.2	(1.3)	74.7	(1.1)	85.6	(3.1)	c	c	91.7	(0.8)	95.6	(0.4)	98.7	(1.1)	c	c
	Tunisia	73.6	(1.2)	79.6	(1.7)	c	c	c	c	93.5	(0.6)	96.3	(0.6)	c	c	c	c
	Uruguay	36.9	(1.7)	35.4	(1.2)	44.1	(3.5)	c	c	72.2	(1.4)	75.0	(1.0)	81.5	(2.5)	c	c

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[Part 3/3]

Table A3.5b Enjoyment of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements							
		I am interested in learning about science							
		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	37.3	(1.8)	53.3	(0.8)	74.1	(1.2)	87.2	(1.1)
	Austria	32.2	(2.4)	38.1	(1.4)	56.3	(1.9)	68.5	(2.8)
	Belgium	54.8	(2.9)	62.4	(1.0)	77.2	(1.1)	89.7	(1.3)
	Canada	54.1	(2.1)	64.6	(1.0)	79.7	(1.3)	90.7	(1.0)
	Czech Republic	50.9	(2.4)	58.7	(1.5)	66.7	(2.1)	78.2	(2.6)
	Denmark	46.4	(2.0)	58.9	(1.1)	78.9	(1.8)	87.3	(2.9)
	Finland	43.5	(4.4)	58.4	(1.3)	73.9	(1.5)	84.6	(1.6)
	France	65.4	(1.7)	74.9	(1.0)	88.3	(1.0)	96.2	(1.0)
	Germany	43.4	(2.6)	54.5	(1.2)	68.7	(1.7)	82.1	(1.7)
	Greece	56.7	(1.6)	69.5	(1.3)	83.5	(2.3)	90.8	(3.6)
	Hungary	60.9	(2.4)	69.6	(1.0)	79.6	(1.8)	89.6	(2.2)
	Iceland	30.1	(1.8)	53.1	(1.2)	78.4	(2.1)	87.8	(2.5)
	Ireland	40.8	(2.0)	59.8	(1.2)	79.1	(1.3)	89.8	(1.8)
	Italy	64.1	(1.3)	72.8	(0.8)	84.2	(1.0)	89.6	(2.1)
	Japan	28.1	(1.9)	41.9	(1.4)	58.1	(1.8)	74.3	(1.9)
	Korea	21.8	(2.0)	37.9	(1.1)	63.2	(1.7)	79.3	(2.4)
	Luxembourg	44.0	(1.9)	52.2	(1.1)	68.9	(1.7)	81.1	(2.9)
	Mexico	84.8	(0.9)	85.4	(0.7)	91.0	(2.1)	c	c
	Netherlands	35.0	(3.0)	35.5	(1.3)	55.1	(1.7)	74.0	(2.2)
	New Zealand	47.5	(2.4)	57.5	(1.5)	73.8	(1.7)	87.3	(1.3)
	Norway	40.9	(1.7)	60.0	(1.1)	81.2	(1.7)	90.3	(2.4)
	Poland	39.1	(2.3)	40.8	(1.2)	51.3	(1.7)	63.1	(2.7)
	Portugal	76.5	(1.8)	84.9	(0.8)	92.1	(1.3)	96.2	(1.7)
	Slovak Republic	48.9	(2.2)	55.8	(1.1)	66.1	(1.9)	71.8	(2.7)
	Spain	52.8	(1.7)	67.6	(0.9)	83.4	(1.1)	92.4	(1.6)
	Sweden	35.2	(2.3)	53.0	(1.0)	70.5	(2.0)	88.3	(1.9)
	Switzerland	37.0	(1.9)	49.1	(1.1)	68.1	(1.6)	82.0	(2.1)
	Turkey	72.3	(1.3)	82.2	(1.0)	93.4	(1.9)	c	c
	United Kingdom	51.8	(2.0)	61.5	(1.2)	75.9	(1.7)	87.3	(1.4)
	United States	56.8	(2.0)	60.4	(1.1)	77.9	(1.5)	87.9	(1.8)
	OECD average	46.3	(0.4)	57.4	(0.2)	73.4	(0.3)	84.6	(0.4)
Partners	Argentina	77.8	(1.1)	80.2	(1.2)	79.9	(3.8)	c	c
	Azerbaijan	89.1	(0.8)	89.1	(1.2)	c	c	c	c
	Brazil	85.8	(0.8)	84.7	(1.0)	92.3	(2.2)	c	c
	Bulgaria	83.1	(1.2)	89.3	(0.8)	94.9	(1.3)	96.6	(2.1)
	Chile	71.9	(1.3)	73.3	(1.1)	84.2	(2.1)	c	c
	Colombia	94.2	(0.6)	93.6	(1.1)	c	c	c	c
	Croatia	56.8	(1.8)	61.8	(1.1)	70.5	(1.8)	75.7	(3.9)
	Estonia	43.8	(3.3)	53.7	(1.1)	61.6	(1.8)	69.7	(2.4)
	Hong Kong-China	51.9	(3.1)	71.4	(1.6)	84.6	(1.3)	93.6	(1.0)
	Indonesia	89.4	(0.7)	89.3	(1.5)	c	c	c	c
	Israel	47.1	(1.7)	57.5	(1.5)	73.2	(2.3)	80.9	(4.0)
	Jordan	81.0	(1.1)	86.5	(1.0)	91.2	(1.8)	c	c
	Kyrgyzstan	92.5	(0.5)	83.6	(1.6)	c	c	c	c
	Latvia	59.5	(2.6)	63.0	(1.5)	72.8	(2.2)	80.5	(4.7)
	Liechtenstein	21.0	(6.4)	42.7	(3.7)	54.7	(6.2)	73.6	(7.7)
	Lithuania	64.8	(1.9)	72.0	(1.1)	81.5	(1.6)	87.0	(2.2)
	Macao-China	64.8	(2.4)	76.5	(0.8)	87.5	(1.2)	91.7	(2.7)
	Montenegro	80.7	(1.2)	76.1	(1.2)	81.8	(4.3)	c	c
	Qatar	71.7	(0.7)	85.2	(1.1)	c	c	c	c
	Romania	74.7	(1.4)	82.1	(1.9)	83.8	(3.1)	c	c
	Russian Federation	54.4	(2.3)	59.7	(1.1)	65.5	(2.0)	69.2	(3.1)
	Serbia	77.3	(1.3)	75.2	(1.1)	80.0	(2.6)	c	c
	Slovenia	50.5	(2.1)	49.4	(1.0)	54.7	(1.8)	62.4	(2.5)
	Chinese Taipei	50.3	(2.4)	56.5	(1.1)	73.6	(1.2)	82.2	(1.5)
	Thailand	90.5	(0.8)	93.9	(0.6)	98.1	(1.1)	c	c
	Tunisia	89.7	(0.7)	93.9	(0.7)	c	c	c	c
	Uruguay	75.7	(1.2)	74.6	(1.2)	79.5	(2.7)	c	c



[Part 1/1]

Table A3.6a Instrumental motivation to learn science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.38	(0.04)	-0.08	(0.02)	0.31	(0.03)	0.65	(0.03)	**-0.33**	(0.05)
	Austria	-0.39	(0.08)	-0.49	(0.03)	-0.33	(0.06)	-0.13	(0.07)	**-0.20**	(0.09)
	Belgium	-0.37	(0.06)	-0.34	(0.02)	-0.10	(0.03)	0.18	(0.04)	**-0.29**	(0.05)
	Canada	-0.03	(0.04)	0.15	(0.02)	0.46	(0.03)	0.79	(0.04)	**-0.33**	(0.04)
	Czech Republic	-0.20	(0.05)	-0.31	(0.03)	-0.21	(0.04)	-0.02	(0.05)	**-0.19**	(0.05)
	Denmark	-0.15	(0.04)	-0.04	(0.02)	0.25	(0.04)	0.50	(0.08)	**-0.24**	(0.10)
	Finland	-0.62	(0.08)	-0.45	(0.02)	-0.15	(0.03)	0.24	(0.03)	**-0.39**	(0.04)
	France	-0.34	(0.05)	-0.22	(0.03)	0.22	(0.03)	0.68	(0.05)	**-0.46**	(0.07)
	Germany	-0.20	(0.05)	-0.16	(0.03)	-0.01	(0.04)	0.27	(0.05)	**-0.27**	(0.06)
	Greece	0.02	(0.03)	0.03	(0.02)	0.28	(0.06)	0.50	(0.11)	-0.22	(0.14)
	Hungary	0.03	(0.05)	-0.13	(0.02)	-0.07	(0.05)	0.23	(0.08)	**-0.30**	(0.09)
	Iceland	-0.36	(0.04)	0.00	(0.03)	0.49	(0.05)	0.86	(0.07)	**-0.37**	(0.09)
	Ireland	-0.28	(0.06)	0.04	(0.03)	0.42	(0.04)	0.71	(0.05)	**-0.29**	(0.07)
	Italy	0.03	(0.02)	0.08	(0.02)	0.30	(0.03)	0.48	(0.05)	**-0.17**	(0.06)
	Japan	-0.83	(0.05)	-0.62	(0.03)	-0.27	(0.03)	0.16	(0.04)	**-0.42**	(0.05)
	Korea	-0.53	(0.04)	-0.39	(0.02)	-0.06	(0.04)	0.23	(0.10)	**-0.29**	(0.09)
	Luxembourg	-0.21	(0.04)	-0.21	(0.02)	-0.02	(0.04)	0.27	(0.08)	**-0.28**	(0.09)
	Mexico	0.55	(0.02)	0.52	(0.02)	0.60	(0.06)	c	c	c	c
	Netherlands	-0.33	(0.04)	-0.34	(0.02)	-0.18	(0.04)	0.18	(0.05)	**-0.36**	(0.06)
	New Zealand	-0.18	(0.05)	-0.01	(0.03)	0.31	(0.04)	0.64	(0.04)	**-0.33**	(0.07)
	Norway	-0.36	(0.05)	-0.23	(0.02)	0.09	(0.05)	0.44	(0.07)	**-0.35**	(0.10)
	Poland	0.21	(0.04)	0.11	(0.02)	0.18	(0.04)	0.36	(0.05)	**-0.18**	(0.07)
	Portugal	0.12	(0.04)	0.44	(0.03)	1.02	(0.04)	1.19	(0.09)	-0.18	(0.11)
	Slovak Republic	-0.19	(0.05)	-0.23	(0.03)	-0.12	(0.04)	0.03	(0.06)	**-0.16**	(0.07)
	Spain	-0.14	(0.03)	-0.06	(0.02)	0.44	(0.04)	0.79	(0.05)	**-0.35**	(0.06)
	Sweden	-0.38	(0.06)	-0.15	(0.02)	0.17	(0.04)	0.62	(0.06)	**-0.45**	(0.07)
	Switzerland	-0.39	(0.04)	-0.39	(0.02)	-0.12	(0.03)	0.26	(0.04)	**-0.38**	(0.05)
	Turkey	0.19	(0.03)	0.41	(0.03)	0.78	(0.08)	c	c	c	c
	United Kingdom	-0.08	(0.04)	0.06	(0.02)	0.30	(0.03)	0.64	(0.04)	**-0.35**	(0.05)
	United States	0.17	(0.03)	0.22	(0.02)	0.44	(0.03)	0.65	(0.06)	**-0.22**	(0.07)
	OECD average	-0.23	(0.01)	-0.13	(0.00)	0.14	(0.01)	0.44	(0.01)	**-0.30**	(0.01)
Partners	Argentina	0.48	(0.03)	0.38	(0.03)	0.44	(0.12)	c	c	c	c
	Azerbaijan	0.56	(0.03)	0.54	(0.03)	c	c	c	c	c	c
	Brazil	0.51	(0.02)	0.43	(0.03)	0.50	(0.10)	c	c	c	c
	Bulgaria	0.41	(0.03)	0.31	(0.03)	0.32	(0.05)	0.40	(0.10)	-0.08	(0.12)
	Chile	0.51	(0.04)	0.47	(0.03)	0.72	(0.08)	c	c	c	c
	Colombia	0.70	(0.03)	0.57	(0.03)	c	c	c	c	c	c
	Croatia	0.05	(0.06)	0.02	(0.03)	0.08	(0.04)	0.19	(0.07)	-0.12	(0.08)
	Estonia	0.11	(0.06)	0.03	(0.02)	0.04	(0.03)	0.19	(0.04)	**-0.14**	(0.05)
	Hong Kong-China	-0.12	(0.07)	0.01	(0.02)	0.22	(0.04)	0.48	(0.04)	**-0.26**	(0.05)
	Indonesia	0.75	(0.02)	0.78	(0.05)	c	c	c	c	c	c
	Israel	-0.10	(0.04)	-0.39	(0.03)	-0.68	(0.06)	-0.87	(0.07)	**0.19**	(0.08)
	Jordan	0.65	(0.02)	0.89	(0.02)	1.12	(0.05)	c	c	c	c
	Kyrgyzstan	0.90	(0.02)	0.52	(0.04)	c	c	c	c	c	c
	Latvia	0.11	(0.04)	-0.04	(0.02)	0.05	(0.04)	0.18	(0.08)	-0.13	(0.08)
	Liechtenstein	-0.37	(0.14)	-0.41	(0.08)	-0.35	(0.13)	0.14	(0.16)	**-0.48**	(0.22)
	Lithuania	0.34	(0.03)	0.35	(0.02)	0.42	(0.04)	0.57	(0.07)	-0.15	(0.08)
	Macao-China	0.15	(0.05)	0.34	(0.02)	0.54	(0.04)	0.76	(0.08)	**-0.22**	(0.09)
	Montenegro	0.55	(0.02)	0.35	(0.02)	0.29	(0.11)	c	c	c	c
	Qatar	0.46	(0.02)	0.76	(0.03)	c	c	c	c	c	c
	Romania	0.37	(0.03)	0.42	(0.04)	0.44	(0.09)	c	c	c	c
	Russian Federation	0.34	(0.03)	0.20	(0.02)	0.11	(0.04)	0.18	(0.06)	-0.07	(0.07)
	Serbia	0.22	(0.03)	0.02	(0.03)	0.14	(0.08)	c	c	c	c
	Slovenia	0.02	(0.04)	0.00	(0.02)	0.09	(0.04)	0.28	(0.06)	**-0.19**	(0.08)
	Chinese Taipei	0.15	(0.04)	0.16	(0.02)	0.35	(0.02)	0.56	(0.03)	**-0.21**	(0.04)
	Thailand	0.62	(0.01)	0.77	(0.02)	1.07	(0.07)	c	c	c	c
	Tunisia	0.71	(0.02)	1.02	(0.03)	c	c	c	c	c	c
	Uruguay	0.25	(0.03)	0.13	(0.03)	0.26	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/3]

Table A3.6b Instrumental motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Making an effort in my science subject(s) is worth it because this will help me in the work I want to do later on								What I learn in my science subject(s) is important for me because I need this for what I want to study later on							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	52.7	(1.8)	61.1	(1.0)	72.6	(1.1)	81.5	(1.4)	42.3	(1.8)	48.6	(1.0)	60.1	(1.4)	70.9	(1.4)
	Austria	48.6	(2.7)	41.0	(1.5)	44.2	(2.5)	51.6	(3.3)	39.7	(2.5)	31.6	(1.2)	37.7	(2.4)	47.1	(3.2)
	Belgium	55.6	(2.4)	49.6	(1.1)	58.5	(1.6)	72.0	(1.9)	49.4	(2.7)	41.2	(1.2)	50.5	(1.6)	65.4	(2.3)
	Canada	68.3	(2.0)	68.8	(1.0)	76.8	(1.5)	84.1	(1.2)	58.4	(2.2)	58.0	(1.2)	65.8	(1.3)	75.5	(1.5)
	Czech Republic	58.1	(2.6)	47.8	(1.5)	48.1	(2.5)	55.8	(2.6)	54.1	(3.2)	48.8	(1.5)	54.0	(2.2)	62.5	(3.0)
	Denmark	61.9	(2.2)	63.1	(1.3)	67.3	(2.2)	73.2	(3.7)	54.1	(2.4)	57.4	(1.2)	67.7	(2.1)	75.1	(3.2)
	Finland	42.2	(4.8)	44.7	(1.5)	56.0	(1.6)	69.2	(1.8)	36.0	(4.6)	31.9	(1.1)	44.8	(1.7)	62.6	(1.9)
	France	54.3	(2.1)	53.2	(1.3)	67.9	(1.7)	83.0	(2.1)	46.5	(2.5)	45.4	(1.5)	61.0	(1.7)	78.6	(2.4)
	Germany	58.7	(2.3)	55.6	(1.3)	57.0	(1.8)	66.3	(2.2)	49.1	(2.2)	44.1	(1.3)	48.0	(1.8)	59.4	(2.0)
	Greece	68.1	(2.0)	62.2	(1.2)	69.5	(2.5)	77.7	(4.3)	62.1	(1.8)	58.6	(1.1)	66.2	(2.3)	74.5	(4.4)
	Hungary	75.2	(2.4)	66.5	(1.4)	66.7	(2.1)	76.1	(3.6)	63.0	(2.8)	53.1	(1.4)	53.1	(2.4)	65.1	(3.2)
	Iceland	50.7	(2.2)	59.0	(1.2)	75.3	(1.8)	86.1	(2.5)	48.3	(2.2)	61.2	(1.3)	77.8	(1.9)	87.8	(2.5)
	Ireland	52.5	(2.6)	63.9	(1.3)	74.1	(1.5)	81.6	(1.9)	43.7	(2.6)	49.8	(1.2)	61.0	(1.8)	72.3	(2.2)
	Italy	64.3	(1.5)	63.1	(1.0)	71.7	(1.5)	81.9	(2.1)	63.9	(1.3)	60.8	(1.1)	69.5	(1.5)	78.3	(2.9)
	Japan	35.4	(2.3)	40.9	(1.5)	50.8	(1.9)	65.7	(2.0)	30.8	(2.0)	35.8	(1.6)	46.0	(1.8)	63.2	(2.1)
	Korea	46.6	(2.2)	52.4	(1.0)	63.4	(1.7)	73.1	(3.0)	40.7	(2.1)	40.6	(1.0)	51.0	(1.9)	62.1	(4.0)
	Luxembourg	58.8	(1.9)	53.5	(1.0)	59.3	(2.1)	68.2	(3.2)	49.8	(1.9)	44.6	(1.3)	52.1	(2.4)	60.0	(3.7)
	Mexico	87.7	(0.7)	84.1	(0.6)	84.4	(2.1)	c	c	85.0	(0.9)	79.8	(0.7)	77.3	(2.8)	c	c
	Netherlands	52.4	(3.8)	52.0	(1.3)	53.6	(1.9)	65.2	(2.3)	45.2	(2.6)	42.6	(1.3)	45.8	(2.1)	60.8	(2.2)
	New Zealand	63.3	(2.6)	63.3	(1.4)	73.2	(1.8)	81.5	(1.5)	52.9	(2.8)	49.4	(1.5)	58.9	(2.0)	70.5	(1.8)
	Norway	52.3	(2.0)	52.5	(1.0)	63.9	(1.9)	76.7	(2.9)	48.0	(2.3)	49.6	(1.1)	60.8	(2.1)	77.0	(2.7)
	Poland	76.5	(1.8)	67.3	(1.1)	63.9	(1.7)	67.7	(2.5)	75.3	(2.0)	69.7	(1.0)	70.7	(1.6)	73.8	(2.6)
	Portugal	65.1	(1.7)	73.9	(1.2)	90.9	(1.4)	95.1	(2.4)	70.0	(1.8)	77.2	(1.1)	92.5	(1.4)	95.6	(2.8)
	Slovak Republic	59.8	(2.6)	52.1	(1.7)	56.1	(2.3)	62.0	(2.9)	47.3	(2.6)	40.1	(1.4)	42.9	(2.3)	48.5	(3.5)
	Spain	61.4	(1.8)	62.7	(0.7)	76.1	(1.5)	85.1	(1.9)	49.5	(1.8)	49.8	(0.9)	67.3	(1.6)	80.5	(1.9)
	Sweden	53.2	(2.3)	58.9	(1.1)	68.4	(1.9)	81.2	(2.5)	44.1	(2.9)	51.3	(1.1)	62.0	(1.9)	79.5	(2.6)
	Switzerland	50.0	(2.1)	49.0	(1.0)	57.6	(1.5)	70.2	(2.2)	41.2	(2.2)	39.2	(1.1)	46.7	(1.6)	62.0	(2.0)
	Turkey	77.2	(1.2)	81.6	(1.1)	90.7	(2.0)	c	c	75.1	(1.4)	80.5	(1.2)	90.3	(2.2)	c	c
	United Kingdom	65.9	(1.9)	68.1	(1.0)	74.2	(1.3)	83.3	(1.6)	53.0	(1.9)	49.8	(1.2)	54.6	(1.7)	68.0	(1.7)
	United States	77.4	(1.9)	76.9	(1.0)	80.2	(1.6)	84.9	(2.0)	70.1	(1.7)	65.9	(1.1)	68.3	(1.7)	74.1	(2.7)
	OECD average	58.2	(0.5)	58.0	(0.2)	65.6	(0.3)	75.0	(0.5)	51.0	(0.5)	49.9	(0.2)	58.5	(0.4)	69.7	(0.5)
Partners	Argentina	84.2	(1.0)	78.3	(1.4)	80.5	(5.0)	c	c	79.5	(1.2)	70.0	(1.4)	70.5	(5.8)	c	c
	Azerbaijan	84.5	(0.8)	82.0	(1.3)	c	c	c	c	79.2	(1.3)	76.5	(1.6)	c	c	c	c
	Brazil	81.7	(1.0)	75.3	(1.4)	73.8	(4.4)	c	c	78.2	(1.1)	70.8	(1.5)	68.7	(4.9)	c	c
	Bulgaria	79.8	(1.7)	70.9	(1.2)	66.9	(3.0)	75.1	(5.1)	79.5	(1.3)	72.8	(1.2)	71.7	(3.4)	75.3	(5.2)
	Chile	84.6	(1.2)	79.8	(1.2)	81.6	(3.0)	c	c	76.3	(1.5)	68.6	(1.5)	75.7	(3.4)	c	c
	Colombia	88.6	(0.9)	84.0	(1.4)	c	c	c	c	84.1	(1.3)	77.1	(1.7)	c	c	c	c
	Croatia	64.7	(2.4)	61.2	(1.5)	59.3	(2.0)	64.7	(4.0)	68.7	(2.0)	68.8	(1.3)	71.0	(1.8)	75.6	(3.3)
	Estonia	78.4	(3.1)	70.8	(1.1)	66.9	(1.5)	71.8	(2.2)	69.3	(3.2)	61.8	(1.2)	59.3	(1.7)	64.8	(2.8)
	Hong Kong-China	67.4	(3.8)	69.5	(1.3)	74.2	(1.6)	81.7	(1.6)	57.5	(5.7)	59.0	(1.5)	64.2	(1.6)	73.9	(1.7)
	Indonesia	95.2	(0.5)	95.0	(1.1)	c	c	c	c	93.8	(0.5)	95.6	(0.6)	c	c	c	c
	Israel	58.0	(1.9)	44.5	(1.4)	32.4	(2.4)	26.4	(3.4)	53.0	(1.9)	44.0	(1.4)	32.8	(2.4)	25.5	(3.4)
	Jordan	92.0	(0.8)	95.4	(0.5)	95.6	(1.4)	c	c	84.1	(0.9)	89.5	(0.7)	93.7	(1.7)	c	c
	Kyrgyzstan	94.7	(0.4)	81.3	(1.9)	c	c	c	c	92.0	(0.5)	84.5	(1.5)	c	c	c	c
	Latvia	73.0	(2.0)	61.8	(1.3)	63.3	(2.6)	66.3	(4.5)	71.3	(2.1)	67.6	(1.3)	73.9	(2.2)	75.5	(3.5)
	Liechtenstein	57.8	(7.3)	47.4	(4.4)	44.8	(6.5)	59.0	(9.1)	43.1	(7.7)	40.0	(4.4)	31.8	(6.2)	54.6	(7.2)
	Lithuania	81.9	(1.6)	81.5	(0.8)	81.4	(1.6)	83.0	(2.7)	77.8	(1.6)	79.2	(0.8)	78.9	(1.7)	82.1	(2.9)
	Macao-China	76.1	(2.6)	82.8	(1.1)	83.6	(2.2)	88.7	(3.1)	71.8	(2.8)	78.1	(1.3)	84.7	(2.0)	90.0	(3.0)
	Montenegro	85.5	(1.0)	79.4	(1.1)	78.3	(4.4)	c	c	79.5	(1.2)	72.4	(1.1)	67.7	(5.3)	c	c
	Qatar	82.0	(0.6)	85.3	(1.2)	c	c	c	c	77.7	(0.7)	84.0	(1.2)	c	c	c	c
	Romania	82.5	(1.1)	81.2	(1.1)	78.9	(4.1)	c	c	81.1	(1.3)	81.1	(1.4)	75.2	(4.2)	c	c
	Russian Federation	81.5	(1.5)	73.5	(1.0)	66.7	(2.4)	67.8	(3.7)	79.2	(1.4)	74.9	(1.1)	72.8	(2.4)	74.3	(3.2)
	Serbia	76.5	(1.4)	64.4	(1.4)	66.0	(4.3)	c	c	62.7	(1.5)	52.7	(1.6)	60.2	(3.9)	c	c
	Slovenia	72.5	(1.9)	68.1	(1.1)	69.9	(1.8)	73.7	(2.4)	64.3	(2.3)	61.1	(1.2)	61.8	(2.1)	69.7	(2.5)
	Chinese Taipei	76.3	(2.3)	74.9	(1.1)	76.2	(1.1)	81.8	(1.3)	68.5	(1.9)	61.3	(1.0)	64.9	(1.3)	73.0	(1.8)
	Thailand	94.8	(0.5)	93.9	(0.6)	96.0	(2.2)	c	c	91.1	(0.7)	93.5	(0.5)	95.4	(1.7)	c	c
	Tunisia	88.3	(0.7)	90.3	(1.0)	c	c	c	c	83.9	(1.0)	89.1	(1.1)	c	c	c	c
	Uruguay	79.4	(1.4)	71.1	(1.2)	71.5	(2.7)	c	c	70.0	(1.4)	58.4	(1.4)	60.6	(3.0)	c	c

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[Part 2/3]

Table A3.6b Instrumental motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I study science because I know it is useful for me								Studying my science subject(s) is worthwhile for me because what I learn will improve my career prospects							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	50.2	(1.8)	62.6	(0.9)	77.7	(1.0)	87.6	(1.0)	44.8	(1.8)	57.5	(0.9)	73.1	(1.5)	82.9	(1.3)
	Austria	50.7	(2.7)	51.5	(1.4)	60.0	(2.5)	67.6	(2.9)	46.0	(2.3)	44.6	(1.4)	47.7	(2.6)	54.2	(3.3)
	Belgium	49.4	(2.4)	50.8	(1.3)	63.3	(1.7)	76.8	(1.9)	50.8	(3.0)	48.8	(1.1)	59.1	(1.5)	71.4	(2.2)
	Canada	60.9	(2.0)	71.0	(1.0)	79.9	(1.1)	88.3	(1.0)	58.0	(2.2)	67.1	(1.1)	77.6	(1.3)	85.8	(1.2)
	Czech Republic	53.3	(2.3)	60.0	(1.6)	66.5	(2.4)	74.7	(2.4)	49.3	(2.8)	45.4	(1.5)	50.4	(2.0)	59.5	(2.6)
	Denmark	57.4	(2.5)	64.3	(1.2)	77.5	(2.0)	80.8	(3.5)	53.5	(2.0)	58.6	(1.2)	69.8	(2.2)	78.2	(2.8)
	Finland	35.9	(4.6)	53.0	(1.2)	68.6	(1.6)	81.9	(1.9)	35.1	(4.2)	40.1	(1.2)	54.2	(1.6)	69.2	(1.8)
	France	52.9	(2.1)	63.6	(1.4)	79.7	(1.8)	88.9	(2.2)	51.3	(2.2)	56.4	(1.3)	71.8	(1.6)	84.6	(2.1)
	Germany	57.4	(2.1)	62.3	(1.4)	71.0	(2.2)	79.3	(1.8)	49.8	(2.3)	51.6	(1.3)	58.7	(1.7)	68.5	(1.9)
	Greece	62.9	(1.9)	69.4	(1.2)	80.4	(2.7)	83.9	(4.5)	60.6	(1.8)	61.6	(1.2)	71.2	(2.3)	75.4	(4.8)
	Hungary	66.6	(2.6)	65.3	(1.3)	66.3	(2.0)	75.1	(3.3)	61.1	(3.0)	50.6	(1.6)	48.9	(2.7)	62.5	(3.5)
	Iceland	46.1	(2.1)	62.8	(1.3)	80.0	(1.8)	88.6	(2.2)	46.0	(2.1)	57.3	(1.3)	74.3	(1.9)	85.7	(2.6)
	Ireland	52.5	(2.5)	69.9	(1.2)	83.7	(1.6)	91.3	(1.5)	49.0	(2.4)	64.6	(1.3)	80.0	(1.4)	86.6	(1.6)
	Italy	69.0	(1.2)	76.2	(0.7)	84.5	(1.2)	88.6	(1.8)	65.5	(1.3)	71.3	(0.7)	79.6	(1.2)	82.7	(2.5)
	Japan	25.3	(1.9)	33.8	(1.6)	49.6	(1.6)	65.1	(1.6)	24.7	(1.7)	32.6	(1.5)	48.1	(1.5)	66.6	(1.9)
	Korea	43.6	(2.2)	51.2	(1.1)	63.9	(1.8)	68.6	(3.9)	40.0	(2.2)	46.0	(1.2)	61.2	(1.9)	72.2	(3.4)
	Luxembourg	55.1	(1.7)	59.5	(1.0)	67.6	(2.2)	75.6	(3.1)	52.1	(1.8)	52.1	(1.2)	57.8	(1.9)	65.9	(3.3)
	Mexico	84.1	(0.8)	88.0	(0.5)	90.3	(2.5)	c	c	84.1	(0.9)	85.8	(0.6)	85.3	(2.0)	c	c
	Netherlands	52.6	(3.2)	57.8	(1.3)	66.1	(2.0)	76.1	(2.1)	51.0	(3.1)	52.0	(1.2)	56.8	(1.8)	69.2	(2.3)
	New Zealand	55.5	(2.8)	64.2	(1.2)	78.7	(1.5)	86.8	(1.5)	54.0	(2.6)	61.2	(1.2)	74.7	(1.7)	85.0	(1.6)
	Norway	49.9	(2.3)	57.9	(1.1)	70.8	(2.6)	81.1	(3.2)	49.7	(2.2)	55.8	(1.0)	69.2	(2.2)	80.0	(2.9)
	Poland	71.5	(2.0)	72.4	(1.0)	75.6	(1.5)	78.0	(2.3)	74.8	(2.0)	72.2	(1.0)	73.1	(1.8)	76.8	(2.6)
	Portugal	76.1	(2.0)	84.3	(1.0)	94.9	(1.2)	96.6	(1.9)	71.6	(1.6)	81.6	(1.0)	94.1	(1.0)	96.1	(1.6)
	Slovak Republic	57.0	(2.6)	61.5	(1.6)	66.9	(2.2)	74.2	(3.6)	52.8	(2.8)	54.2	(1.5)	62.1	(2.3)	70.6	(3.4)
	Spain	55.6	(1.6)	63.0	(0.8)	78.3	(1.4)	87.9	(1.8)	53.4	(1.8)	59.2	(0.8)	75.9	(1.5)	86.7	(2.3)
	Sweden	50.2	(2.4)	59.6	(1.3)	69.8	(1.8)	81.6	(2.3)	48.6	(2.9)	59.4	(1.0)	72.3	(1.7)	86.0	(2.1)
	Switzerland	48.4	(1.8)	54.3	(1.1)	68.0	(1.4)	79.5	(2.1)	45.6	(2.1)	43.9	(1.1)	53.9	(1.7)	67.8	(1.7)
	Turkey	67.0	(1.5)	76.0	(1.1)	87.9	(2.2)	c	c	70.8	(1.3)	74.0	(1.2)	81.4	(2.6)	c	c
	United Kingdom	63.3	(1.9)	72.0	(1.1)	79.8	(1.3)	88.0	(1.5)	60.0	(1.8)	67.9	(1.1)	76.6	(1.6)	85.3	(1.6)
	United States	70.6	(1.6)	75.6	(1.1)	82.3	(1.3)	86.8	(1.7)	66.3	(1.5)	66.9	(1.3)	74.6	(1.6)	83.1	(1.9)
	OECD average	55.0	(0.4)	62.5	(0.2)	73.3	(0.3)	81.4	(0.5)	52.3	(0.4)	56.5	(0.2)	66.7	(0.3)	76.4	(0.5)
Partners	Argentina	80.4	(1.1)	79.9	(1.2)	81.0	(5.1)	c	c	78.8	(1.2)	79.7	(1.1)	80.8	(4.2)	c	c
	Azerbaijan	84.8	(1.0)	86.9	(1.4)	c	c	c	c	80.9	(1.1)	80.0	(1.5)	c	c	c	c
	Brazil	86.8	(0.7)	88.3	(0.9)	88.3	(2.8)	c	c	83.2	(0.7)	80.2	(1.1)	81.5	(3.7)	c	c
	Bulgaria	83.5	(1.3)	87.0	(0.9)	91.1	(1.8)	91.3	(3.0)	78.0	(1.3)	75.8	(1.2)	76.7	(2.2)	81.3	(3.9)
	Chile	78.1	(1.3)	79.0	(1.1)	86.7	(1.8)	c	c	78.3	(1.5)	76.0	(1.3)	83.3	(2.6)	c	c
	Colombia	89.3	(1.1)	90.2	(0.9)	c	c	c	c	86.0	(1.0)	81.7	(1.3)	c	c	c	c
	Croatia	67.6	(2.1)	70.7	(1.2)	74.0	(2.1)	77.4	(3.5)	61.0	(2.7)	60.3	(1.6)	64.4	(2.1)	68.1	(3.6)
	Estonia	67.9	(3.4)	74.0	(0.9)	79.7	(1.6)	85.3	(1.5)	66.6	(3.1)	64.1	(1.2)	62.8	(1.7)	68.4	(2.4)
	Hong Kong-China	63.1	(4.6)	66.9	(1.1)	75.0	(1.5)	82.8	(1.8)	63.2	(4.4)	67.9	(1.3)	73.9	(1.6)	80.8	(1.4)
	Indonesia	94.1	(0.5)	95.4	(0.7)	c	c	c	c	88.7	(0.7)	87.5	(1.1)	c	c	c	c
	Israel	48.2	(1.8)	38.8	(1.5)	27.8	(2.1)	19.5	(3.0)	47.9	(1.7)	36.3	(1.3)	26.7	(2.4)	18.4	(3.2)
	Jordan	84.0	(0.9)	91.5	(0.7)	93.9	(2.1)	c	c	82.4	(0.9)	89.2	(0.8)	93.2	(1.9)	c	c
	Kyrgyzstan	90.2	(0.5)	86.2	(1.6)	c	c	c	c	88.7	(0.6)	71.9	(1.8)	c	c	c	c
	Latvia	72.4	(2.1)	76.3	(1.1)	82.7	(1.4)	87.3	(2.9)	57.5	(2.8)	47.8	(1.4)	51.5	(3.0)	58.3	(4.4)
	Liechtenstein	42.3	(7.8)	51.6	(4.2)	58.6	(5.5)	81.1	(7.5)	44.7	(8.8)	40.8	(4.6)	38.7	(5.6)	61.7	(8.4)
	Lithuania	81.8	(1.6)	85.8	(0.8)	91.5	(1.2)	92.7	(1.9)	71.6	(1.9)	68.0	(1.1)	67.1	(2.3)	72.3	(3.3)
	Macao-China	76.4	(2.5)	84.6	(0.9)	89.4	(1.4)	94.2	(2.6)	70.3	(2.8)	77.8	(1.3)	82.5	(2.4)	89.2	(3.3)
	Montenegro	84.3	(1.0)	84.7	(1.0)	86.3	(4.8)	c	c	77.4	(1.3)	70.0	(1.1)	65.4	(4.6)	c	c
	Qatar	76.3	(0.7)	89.2	(1.1)	c	c	c	c	72.7	(0.6)	85.4	(1.1)	c	c	c	c
	Romania	75.0	(1.5)	80.7	(1.2)	82.2	(4.1)	c	c	78.6	(1.4)	82.5	(1.4)	81.5	(3.8)	c	c
	Russian Federation	78.9	(1.3)	74.5	(0.9)	72.0	(1.7)	73.6	(3.4)	72.5	(1.4)	63.2	(1.2)	57.2	(2.3)	59.6	(3.6)
	Serbia	77.1	(1.3)	77.1	(1.0)	80.7	(2.1)	c	c	69.7	(1.4)	63.9	(1.5)	70.1	(3.5)	c	c
	Slovenia	68.5	(2.0)	70.4	(1.2)	75.9	(2.3)	78.3	(2.6)	61.3	(2.2)	62.3	(1.4)	63.4	(2.5)	71.1	(2.8)
	Chinese Taipei	73.7	(2.0)	80.4	(0.9)	87.2	(1.0)	92.2	(0.9)	72.0	(2.4)	73.0	(1.0)	77.4	(1.0)	83.4	(1.3)
	Thailand	93.2	(0.6)	96.9	(0.4)	97.9	(0.9)	c	c	92.1	(0.6)	93.4	(0.6)	94.1	(2.5)	c	c
	Tunisia	86.4	(1.0)	94.1	(0.9)	c	c	c	c	81.2	(1.0)	89.6	(1.1)	c	c	c	c
	Uruguay	74.9	(1.4)	74.1	(1.2)	77.5	(2.9)	c	c	67.2	(1.5)	61.8	(1.5)	69.7	(2.6)	c	c

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[Part 3/3]

Table A3.6b Instrumental motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements							
		I will learn many things in my science subject(s) what will help me get a job							
		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	46.7	(1.5)	56.0	(0.9)	68.2	(1.3)	76.9	(1.3)
	Austria	42.9	(3.1)	36.2	(1.4)	38.0	(2.6)	41.0	(3.5)
	Belgium	45.4	(2.3)	44.0	(1.2)	49.8	(1.6)	58.7	(2.5)
	Canada	59.0	(2.0)	64.7	(1.0)	72.6	(1.2)	78.9	(1.5)
	Czech Republic	50.9	(2.5)	44.9	(1.2)	46.8	(2.1)	53.1	(2.6)
	Denmark	52.4	(2.4)	50.9	(1.3)	59.2	(2.6)	68.8	(3.5)
	Finland	34.4	(4.0)	38.2	(1.2)	51.7	(1.6)	64.1	(2.0)
	France	44.3	(2.4)	43.9	(1.4)	53.2	(2.0)	67.6	(2.9)
	Germany	51.3	(2.4)	47.6	(1.3)	50.7	(2.2)	58.0	(2.1)
	Greece	60.1	(1.9)	56.4	(1.3)	57.9	(3.0)	63.3	(4.9)
	Hungary	60.8	(3.0)	51.1	(1.6)	50.3	(2.6)	58.4	(4.1)
	Iceland	42.6	(2.1)	54.4	(1.4)	70.2	(2.2)	80.6	(3.3)
	Ireland	52.0	(2.5)	64.3	(1.2)	74.3	(1.6)	80.9	(2.1)
	Italy	61.0	(1.3)	61.4	(1.0)	67.4	(1.7)	70.3	(2.8)
	Japan	26.4	(1.9)	31.7	(1.5)	44.5	(1.6)	59.2	(2.0)
	Korea	38.9	(1.9)	41.7	(1.1)	52.9	(1.7)	60.3	(3.2)
	Luxembourg	50.8	(1.8)	47.0	(1.1)	52.6	(2.1)	57.7	(3.3)
	Mexico	81.2	(0.8)	77.3	(0.8)	74.5	(3.0)	c	c
	Netherlands	45.4	(2.4)	40.5	(1.4)	43.6	(1.9)	57.3	(2.5)
	New Zealand	55.5	(2.5)	59.8	(1.2)	71.4	(1.8)	78.9	(1.7)
	Norway	45.2	(2.4)	44.2	(0.9)	55.8	(2.4)	70.3	(3.2)
	Poland	71.6	(1.9)	65.9	(1.1)	61.3	(1.8)	65.6	(2.7)
	Portugal	67.1	(1.8)	76.3	(1.3)	89.6	(1.5)	90.4	(2.6)
	Slovak Republic	53.8	(2.2)	50.0	(1.4)	53.4	(2.1)	60.1	(3.1)
	Spain	59.1	(1.5)	58.8	(0.9)	70.7	(1.7)	79.7	(2.4)
	Sweden	41.2	(2.2)	48.7	(1.1)	58.6	(1.9)	73.5	(3.7)
	Switzerland	41.7	(2.1)	36.7	(1.1)	43.8	(1.8)	53.0	(2.1)
	Turkey	67.4	(1.6)	68.6	(1.2)	78.7	(2.9)	c	c
	United Kingdom	57.7	(1.8)	62.3	(1.2)	69.9	(1.5)	78.2	(1.8)
	United States	69.1	(1.9)	68.1	(1.1)	72.8	(1.6)	77.2	(2.2)
	OECD average	51.0	(0.4)	51.6	(0.2)	59.0	(0.4)	67.2	(0.5)
Partners	Argentina	79.8	(1.3)	76.1	(1.6)	73.3	(4.8)	c	c
	Azerbaijan	77.9	(1.0)	73.6	(1.5)	c	c	c	c
	Brazil	80.7	(1.0)	74.7	(1.4)	72.5	(4.1)	c	c
	Bulgaria	78.7	(1.5)	72.0	(1.4)	66.2	(2.6)	67.7	(5.3)
	Chile	78.6	(1.3)	71.7	(1.6)	75.6	(3.8)	c	c
	Colombia	82.5	(1.6)	75.0	(1.9)	c	c	c	c
	Croatia	65.0	(2.3)	62.8	(1.4)	63.0	(2.0)	64.4	(3.9)
	Estonia	62.0	(3.0)	52.3	(1.2)	47.5	(1.7)	51.1	(2.7)
	Hong Kong-China	60.2	(4.3)	61.0	(1.4)	65.0	(1.6)	71.9	(1.5)
	Indonesia	87.5	(0.8)	85.0	(1.6)	c	c	c	c
	Israel	51.4	(1.5)	44.7	(1.3)	34.4	(2.2)	32.2	(3.3)
	Jordan	82.7	(1.0)	88.6	(0.8)	92.5	(1.9)	c	c
	Kyrgyzstan	89.8	(0.6)	74.8	(2.1)	c	c	c	c
	Latvia	62.4	(2.0)	54.5	(1.2)	55.0	(2.7)	62.1	(5.1)
	Liechtenstein	49.5	(8.0)	38.3	(4.0)	38.0	(5.6)	61.6	(7.8)
	Lithuania	72.5	(1.6)	66.9	(1.0)	64.0	(2.5)	69.6	(3.9)
	Macao-China	71.1	(2.4)	75.5	(1.2)	76.6	(2.4)	80.8	(3.6)
	Montenegro	77.8	(1.1)	69.4	(1.1)	69.7	(5.5)	c	c
	Qatar	74.8	(0.6)	81.4	(1.2)	c	c	c	c
	Romania	79.2	(1.5)	78.5	(1.6)	75.5	(4.7)	c	c
	Russian Federation	74.0	(1.5)	64.1	(1.2)	56.6	(2.0)	57.8	(3.6)
	Serbia	70.6	(1.4)	58.9	(1.3)	60.1	(3.4)	c	c
	Slovenia	61.5	(2.0)	60.1	(1.1)	61.2	(2.2)	67.9	(3.0)
	Chinese Taipei	73.5	(2.5)	71.9	(1.0)	72.9	(0.9)	78.0	(1.5)
	Thailand	90.4	(0.7)	90.6	(0.7)	92.7	(2.3)	c	c
	Tunisia	81.2	(0.9)	88.0	(1.1)	c	c	c	c
	Uruguay	69.2	(1.6)	62.2	(1.3)	63.4	(2.9)	c	c



[Part 1/3]

Table A3.7 Importance of doing well in science, mathematics and reading, by performance group

		Students reporting doing well in science is very important								Students reporting doing well in mathematics is very important							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	14.3	(1.3)	23.6	(0.7)	38.7	(1.3)	52.2	(1.3)	54.1	(1.6)	60.6	(1.0)	66.2	(1.3)	68.4	(1.4)
	Austria	21.3	(2.6)	18.2	(1.1)	22.8	(1.8)	33.9	(2.8)	62.2	(2.0)	60.8	(1.2)	54.4	(1.9)	55.2	(3.0)
	Belgium	16.3	(1.6)	15.4	(0.9)	22.7	(1.2)	31.9	(2.0)	40.3	(2.3)	42.9	(1.0)	51.5	(1.4)	59.8	(2.1)
	Canada	26.2	(1.8)	33.1	(0.9)	46.4	(1.2)	60.3	(1.6)	58.9	(1.9)	65.3	(0.9)	70.1	(1.3)	75.3	(1.4)
	Czech Republic	16.7	(1.9)	12.3	(1.1)	16.1	(1.7)	22.9	(2.1)	46.0	(3.0)	49.2	(1.6)	51.7	(2.1)	49.6	(2.2)
	Denmark	17.3	(1.6)	20.6	(1.0)	29.6	(2.1)	39.1	(3.7)	58.4	(2.2)	62.0	(1.3)	67.8	(2.4)	72.2	(3.9)
	Finland	3.7	(1.7)	6.1	(0.6)	11.8	(1.0)	25.0	(1.6)	13.7	(3.7)	24.2	(1.0)	34.0	(1.4)	50.6	(1.6)
	France	16.0	(1.9)	18.0	(1.1)	37.9	(1.8)	60.6	(3.1)	53.0	(2.3)	48.1	(1.4)	55.1	(2.3)	62.7	(3.7)
	Germany	22.8	(1.6)	23.6	(1.2)	28.6	(1.6)	36.9	(2.4)	71.9	(2.1)	69.1	(1.2)	62.3	(1.6)	63.3	(2.4)
	Greece	28.2	(1.9)	31.0	(1.1)	49.9	(2.2)	64.5	(4.0)	42.7	(2.3)	52.4	(1.2)	64.4	(2.0)	71.4	(4.3)
	Hungary	23.3	(2.7)	11.8	(0.8)	18.3	(1.7)	33.4	(3.0)	24.4	(2.5)	28.8	(1.1)	35.7	(2.3)	45.9	(3.5)
	Iceland	19.5	(1.5)	32.3	(1.1)	51.1	(2.1)	63.4	(3.0)	74.1	(1.5)	81.0	(1.0)	83.6	(1.8)	88.2	(2.8)
	Ireland	18.0	(1.7)	25.2	(1.0)	39.8	(2.0)	51.4	(3.0)	73.7	(2.1)	73.0	(1.1)	71.3	(1.8)	75.2	(2.6)
	Italy	27.6	(1.3)	26.0	(1.1)	34.1	(2.0)	44.3	(3.0)	44.3	(1.3)	49.8	(1.0)	56.4	(2.2)	58.9	(3.3)
	Japan	13.5	(2.0)	20.3	(1.1)	29.2	(1.4)	39.1	(1.6)	33.8	(2.1)	46.2	(1.3)	58.5	(1.8)	67.2	(1.9)
	Korea	18.1	(1.7)	20.3	(1.1)	30.3	(1.8)	39.1	(3.9)	38.6	(2.2)	54.6	(1.3)	68.5	(1.6)	74.6	(2.5)
	Luxembourg	24.2	(1.8)	25.8	(1.1)	31.4	(1.9)	43.3	(3.5)	57.7	(1.6)	49.8	(1.1)	49.9	(2.1)	58.9	(3.8)
	Mexico	41.8	(1.4)	40.8	(0.8)	48.2	(3.6)	c	c	74.5	(1.1)	82.4	(0.8)	82.7	(2.2)	c	c
	Netherlands	18.9	(2.0)	19.6	(0.9)	25.3	(1.9)	35.9	(2.8)	37.9	(2.6)	41.3	(1.2)	40.2	(1.7)	42.4	(2.4)
	New Zealand	26.4	(3.2)	25.8	(1.3)	36.8	(1.9)	52.0	(2.3)	59.0	(2.3)	64.6	(1.2)	67.0	(1.5)	70.5	(1.9)
	Norway	22.9	(2.1)	25.8	(1.1)	37.0	(2.9)	47.1	(4.8)	45.4	(2.2)	54.9	(1.3)	67.0	(2.4)	74.5	(4.2)
	Poland	19.7	(1.7)	20.0	(0.8)	31.1	(1.6)	41.2	(3.1)	24.6	(1.6)	33.3	(1.1)	48.4	(2.0)	52.4	(3.2)
	Portugal	20.8	(1.8)	36.5	(1.3)	66.6	(2.5)	78.8	(4.5)	45.5	(1.9)	54.2	(1.3)	68.9	(2.2)	76.6	(4.1)
	Slovak Republic	14.1	(1.4)	14.9	(1.0)	20.0	(1.7)	31.9	(2.7)	42.5	(1.9)	45.5	(1.4)	55.2	(2.4)	58.1	(3.2)
	Spain	23.6	(1.3)	32.3	(1.0)	54.0	(2.3)	69.8	(2.5)	42.5	(1.7)	55.0	(0.9)	67.0	(1.4)	74.5	(2.5)
	Sweden	17.5	(1.8)	23.0	(1.1)	34.0	(1.8)	53.1	(3.2)	62.5	(2.1)	56.8	(1.2)	58.5	(2.0)	66.6	(3.4)
	Switzerland	11.5	(1.4)	12.4	(0.6)	20.4	(1.7)	35.0	(2.4)	69.2	(1.9)	63.1	(1.1)	55.0	(1.7)	50.6	(3.1)
	Turkey	38.9	(1.6)	46.3	(1.3)	61.0	(3.6)	c	c	62.8	(1.7)	75.2	(1.1)	78.6	(3.3)	c	c
	United Kingdom	33.9	(1.6)	37.9	(1.2)	43.6	(1.7)	57.5	(2.0)	62.8	(2.1)	67.4	(1.4)	66.3	(1.8)	67.2	(1.8)
	United States	37.3	(1.7)	39.6	(1.0)	50.3	(1.7)	60.6	(2.7)	64.8	(2.0)	68.4	(1.1)	71.0	(2.1)	75.6	(2.5)
	OECD average	20.5	(0.3)	23.3	(0.2)	34.2	(0.3)	46.6	(0.6)	50.2	(0.4)	54.4	(0.2)	59.5	(0.4)	64.5	(0.6)
Partners	Argentina	42.0	(1.7)	41.1	(1.7)	45.4	(4.9)	c	c	58.8	(1.7)	64.0	(1.5)	59.3	(4.8)	c	c
	Azerbaijan	55.6	(1.4)	51.3	(2.0)	c	c	c	c	50.0	(1.5)	50.6	(2.2)	c	c	c	c
	Brazil	41.8	(1.1)	40.2	(1.4)	45.7	(4.1)	c	c	61.8	(1.1)	68.2	(1.2)	63.5	(4.5)	c	c
	Bulgaria	32.2	(1.7)	30.2	(1.2)	35.5	(2.4)	39.5	(5.8)	48.8	(2.0)	62.2	(1.6)	71.8	(2.6)	73.7	(3.3)
	Chile	44.8	(1.6)	46.2	(1.5)	57.2	(3.9)	c	c	72.5	(1.3)	79.5	(1.1)	81.7	(2.6)	c	c
	Colombia	53.8	(1.4)	52.8	(2.3)	c	c	c	c	67.9	(1.2)	73.8	(1.7)	c	c	c	c
	Croatia	17.1	(1.8)	17.1	(1.1)	22.0	(1.7)	29.2	(3.4)	30.9	(2.1)	37.0	(1.3)	40.7	(2.4)	40.8	(3.6)
	Estonia	21.9	(2.9)	20.8	(1.1)	26.8	(1.7)	34.5	(2.5)	45.9	(3.6)	56.9	(1.4)	61.5	(1.9)	68.4	(2.8)
	Hong Kong-China	12.5	(3.2)	23.5	(1.3)	40.3	(1.7)	56.9	(2.1)	38.0	(4.8)	50.5	(1.9)	59.7	(1.9)	67.2	(1.7)
	Indonesia	41.2	(1.2)	45.8	(2.9)	c	c	c	c	58.5	(1.5)	62.4	(1.5)	c	c	c	c
	Israel	30.3	(1.7)	32.2	(1.5)	45.3	(2.8)	52.0	(3.9)	60.1	(1.7)	72.1	(1.6)	75.6	(2.4)	74.2	(3.1)
	Jordan	55.1	(1.2)	60.3	(1.3)	79.1	(2.6)	c	c	48.3	(1.3)	63.4	(1.4)	80.3	(2.7)	c	c
	Kyrgyzstan	52.2	(1.1)	35.2	(2.4)	c	c	c	c	62.5	(1.0)	59.1	(2.6)	c	c	c	c
	Latvia	15.4	(1.9)	13.6	(0.9)	18.3	(1.7)	29.9	(4.1)	53.8	(2.6)	61.4	(1.2)	64.4	(2.6)	70.1	(4.7)
	Liechtenstein	16.0	(5.8)	19.5	(3.7)	23.3	(6.4)	20.0	(6.0)	62.4	(7.8)	59.2	(3.8)	48.2	(5.9)	43.2	(7.4)
	Lithuania	29.9	(1.6)	30.0	(1.1)	39.7	(2.6)	50.4	(4.6)	50.7	(2.1)	61.1	(1.1)	72.6	(1.9)	75.4	(4.9)
	Macao-China	15.7	(2.7)	22.7	(1.4)	36.5	(2.3)	47.8	(5.2)	38.0	(3.2)	38.4	(1.4)	41.1	(2.1)	41.1	(5.7)
	Montenegro	36.3	(1.2)	30.1	(1.4)	36.8	(7.3)	c	c	38.2	(1.2)	36.1	(1.1)	41.9	(6.6)	c	c
	Qatar	49.4	(0.7)	59.0	(1.7)	c	c	c	c	43.9	(0.9)	66.7	(1.8)	c	c	c	c
	Romania	25.1	(1.3)	23.5	(1.1)	35.3	(5.3)	c	c	49.8	(2.1)	60.0	(1.5)	59.8	(5.7)	c	c
	Russian Federation	24.1	(1.5)	21.1	(0.8)	23.7	(1.9)	29.1	(4.2)	48.4	(1.9)	53.8	(1.3)	58.9	(2.4)	63.2	(3.9)
	Serbia	21.4	(1.2)	20.6	(1.1)	30.0	(3.9)	c	c	34.0	(1.6)	30.7	(1.3)	44.3	(3.4)	c	c
	Slovenia	19.8	(2.0)	18.0	(1.0)	22.5	(1.6)	34.3	(2.8)	41.6	(1.9)	44.8	(1.1)	46.5	(2.0)	52.3	(2.8)
	Chinese Taipei	17.0	(1.8)	21.0	(0.9)	32.8	(1.3)	45.5	(2.0)	27.1	(1.7)	39.4	(1.2)	52.1	(1.3)	60.8	(1.6)
	Thailand	54.0	(1.3)	65.0	(1.2)	85.4	(3.4)	c	c	62.1	(1.2)	74.2	(1.1)	82.8	(3.2)	c	c
	Tunisia	55.5	(1.5)	66.9	(1.9)	c	c	c	c	52.8	(1.4)	65.8	(1.6)	c	c	c	c
	Uruguay	35.3	(1.7)	36.5	(1.4)	44.0	(3.1)	c	c	55.4	(1.6)	59.8	(1.3)	68.7	(3.8)	c	c

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[Part 2/3]

Table A3.7 Importance of doing well in science, mathematics and reading, by performance group

		Students reporting doing well in reading is very important								Students reporting doing well in science is very important or important							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	58.8	(1.9)	66.4	(0.8)	66.3	(1.1)	62.6	(1.6)	48.7	(1.8)	65.1	(0.9)	82.2	(1.0)	91.3	(0.9)
	Austria	66.4	(2.7)	56.5	(1.5)	49.8	(2.2)	46.3	(3.3)	60.6	(2.2)	62.0	(1.4)	70.0	(2.2)	76.5	(2.7)
	Belgium	49.4	(2.6)	43.2	(1.0)	30.0	(1.5)	23.0	(2.0)	49.2	(2.3)	58.9	(1.2)	72.2	(1.3)	84.3	(1.4)
	Canada	59.0	(2.1)	57.7	(0.9)	52.4	(1.4)	48.2	(1.6)	67.1	(1.8)	79.8	(0.8)	88.8	(0.9)	94.1	(0.8)
	Czech Republic	49.2	(3.1)	49.7	(1.4)	47.7	(1.9)	37.7	(2.2)	48.8	(3.0)	48.1	(1.7)	60.1	(2.3)	71.3	(2.4)
	Denmark	68.9	(2.2)	69.9	(1.1)	67.0	(1.6)	60.2	(2.9)	59.8	(2.0)	67.2	(1.0)	78.3	(1.7)	86.5	(2.4)
	Finland	18.4	(3.3)	26.3	(1.2)	28.2	(1.5)	30.6	(1.8)	34.6	(4.3)	49.9	(1.3)	67.9	(1.5)	81.7	(1.7)
	France	59.4	(2.1)	49.0	(1.1)	32.8	(1.8)	25.6	(2.7)	50.4	(2.7)	58.7	(1.5)	79.3	(1.6)	89.5	(1.5)
	Germany	71.4	(2.4)	63.6	(1.2)	49.9	(1.7)	39.6	(2.0)	66.1	(2.6)	72.7	(1.3)	80.2	(1.6)	88.7	(1.8)
	Greece	44.1	(2.3)	49.8	(1.1)	45.1	(2.3)	39.0	(5.1)	66.7	(1.9)	73.1	(1.1)	85.6	(1.6)	92.0	(3.3)
	Hungary	30.7	(2.7)	35.0	(1.4)	39.2	(1.8)	33.8	(3.3)	69.4	(2.4)	62.5	(1.3)	68.5	(2.2)	78.8	(3.3)
	Iceland	70.6	(1.8)	67.0	(1.0)	57.2	(2.1)	53.8	(3.8)	47.8	(2.1)	66.1	(1.2)	83.8	(1.7)	93.3	(2.2)
	Ireland	70.3	(2.5)	64.7	(1.4)	59.3	(2.4)	51.0	(3.5)	51.8	(2.2)	72.3	(1.1)	86.2	(1.4)	92.1	(1.4)
	Italy	61.8	(1.4)	60.7	(0.9)	49.9	(1.6)	42.2	(3.4)	77.3	(1.1)	81.6	(0.8)	87.7	(1.0)	93.0	(1.3)
	Japan	43.7	(2.8)	51.1	(1.1)	50.2	(1.6)	47.7	(2.3)	47.5	(2.0)	62.7	(1.1)	76.3	(1.4)	84.7	(1.4)
	Korea	43.9	(2.7)	54.0	(1.3)	59.7	(1.9)	62.0	(4.8)	65.1	(2.4)	71.9	(1.0)	82.2	(1.5)	85.9	(2.2)
	Luxembourg	60.0	(1.9)	51.3	(1.1)	42.8	(2.0)	44.0	(4.4)	61.9	(1.9)	64.6	(1.0)	73.2	(1.7)	84.0	(2.3)
	Mexico	68.8	(1.2)	67.7	(1.1)	58.2	(3.7)	c	c	86.7	(0.7)	90.5	(0.5)	93.4	(1.3)	c	c
	Netherlands	51.9	(4.2)	45.1	(1.3)	30.3	(2.0)	17.0	(1.8)	62.0	(2.6)	69.1	(1.3)	76.4	(1.8)	85.1	(2.3)
	New Zealand	64.5	(2.5)	64.9	(1.1)	59.2	(2.0)	57.0	(2.0)	60.2	(2.6)	69.1	(1.5)	82.8	(1.9)	90.5	(1.1)
	Norway	39.5	(2.4)	41.9	(1.2)	44.8	(2.3)	38.6	(3.5)	66.8	(2.0)	75.9	(0.9)	87.9	(1.4)	94.2	(1.6)
	Poland	32.4	(1.9)	43.4	(1.2)	47.9	(1.9)	39.4	(3.1)	76.1	(1.7)	75.2	(1.0)	81.5	(1.6)	84.0	(2.1)
	Portugal	56.2	(2.0)	43.8	(1.4)	25.9	(2.0)	16.4	(5.7)	74.6	(1.7)	82.9	(1.1)	94.8	(1.2)	97.0	(1.7)
	Slovak Republic	50.5	(2.3)	56.5	(1.3)	53.9	(2.6)	40.5	(4.0)	50.3	(3.1)	57.9	(1.7)	72.3	(2.2)	80.9	(2.9)
	Spain	44.1	(1.9)	51.0	(0.9)	42.9	(1.2)	39.5	(3.1)	59.6	(1.5)	72.1	(0.8)	87.4	(1.3)	95.1	(1.2)
	Sweden	67.3	(2.1)	62.0	(1.3)	58.7	(2.5)	54.5	(3.2)	57.6	(2.1)	71.2	(1.0)	80.5	(1.6)	91.7	(1.6)
	Switzerland	70.7	(1.6)	55.9	(1.1)	44.9	(1.5)	31.7	(2.1)	48.7	(1.9)	54.9	(0.9)	72.6	(1.5)	86.8	(1.6)
	Turkey	70.8	(1.6)	63.7	(1.4)	32.3	(3.6)	c	c	77.1	(1.3)	82.4	(1.1)	92.1	(1.7)	c	c
	United Kingdom	67.2	(2.1)	72.2	(1.1)	66.3	(1.2)	55.4	(1.9)	74.6	(1.8)	81.0	(1.0)	89.5	(1.2)	93.7	(1.1)
	United States	62.9	(1.8)	60.1	(1.4)	59.3	(2.4)	55.1	(3.0)	74.9	(1.5)	81.3	(0.9)	88.7	(1.2)	93.6	(1.5)
	OECD average	54.8	(0.5)	54.0	(0.2)	48.6	(0.4)	42.6	(0.6)	59.9	(0.4)	68.1	(0.2)	79.9	(0.3)	87.9	(0.4)
Partners	Argentina	52.5	(1.8)	46.6	(1.5)	38.8	(4.1)	c	c	82.4	(1.2)	87.8	(0.9)	90.1	(3.5)	c	c
	Azerbaijan	69.2	(1.4)	70.7	(1.9)	c	c	c	c	88.3	(0.8)	88.6	(1.2)	c	c	c	c
	Brazil	71.1	(1.1)	72.7	(1.3)	58.7	(4.3)	c	c	87.6	(0.8)	89.1	(0.9)	93.7	(1.9)	c	c
	Bulgaria	54.8	(1.9)	66.0	(1.5)	68.1	(3.2)	55.0	(8.2)	81.4	(1.2)	81.8	(1.0)	88.3	(2.2)	90.7	(2.8)
	Chile	74.7	(1.3)	72.9	(1.2)	60.7	(3.3)	c	c	87.8	(1.0)	89.1	(0.9)	93.4	(1.2)	c	c
	Colombia	64.8	(1.3)	61.8	(2.4)	c	c	c	c	90.3	(0.8)	92.5	(1.0)	c	c	c	c
	Croatia	37.9	(2.2)	44.0	(1.3)	41.2	(2.2)	34.4	(3.5)	56.8	(2.4)	61.2	(1.5)	69.0	(2.1)	78.2	(3.4)
	Estonia	49.1	(3.6)	55.3	(1.3)	56.1	(1.9)	51.4	(3.0)	72.1	(2.8)	80.1	(1.0)	85.1	(1.4)	89.6	(1.4)
	Hong Kong-China	46.1	(4.1)	53.7	(1.6)	55.4	(1.8)	48.7	(1.8)	52.6	(4.4)	64.4	(1.6)	74.8	(1.5)	87.5	(1.4)
	Indonesia	61.5	(1.3)	53.8	(1.7)	c	c	c	c	89.0	(0.9)	91.0	(1.5)	c	c	c	c
	Israel	55.7	(1.4)	51.7	(1.5)	40.0	(2.6)	33.2	(3.6)	61.9	(1.8)	67.2	(1.6)	79.8	(2.0)	86.6	(3.0)
	Jordan	56.9	(1.4)	51.0	(1.5)	41.8	(4.5)	c	c	90.4	(0.9)	94.6	(0.7)	98.7	(0.7)	c	c
	Kyrgyzstan	66.4	(0.8)	56.9	(2.5)	c	c	c	c	91.5	(0.6)	83.7	(1.6)	c	c	c	c
	Latvia	53.6	(2.5)	54.0	(1.3)	46.6	(2.4)	42.2	(3.6)	65.7	(2.3)	70.3	(1.3)	78.3	(1.9)	83.5	(4.0)
	Liechtenstein	58.4	(9.3)	49.6	(3.9)	36.0	(6.0)	36.2	(8.2)	53.5	(8.1)	58.2	(3.7)	73.0	(5.9)	85.5	(6.8)
	Lithuania	58.7	(2.1)	64.7	(1.3)	64.0	(2.3)	58.8	(3.9)	80.7	(1.6)	83.2	(0.9)	88.5	(1.3)	90.6	(2.2)
	Macao-China	52.0	(3.3)	62.8	(1.5)	58.3	(2.4)	55.7	(4.8)	65.7	(2.7)	76.9	(1.1)	86.8	(2.0)	93.7	(3.5)
	Montenegro	56.0	(1.2)	56.7	(1.3)	53.4	(6.5)	c	c	76.9	(1.2)	75.6	(1.2)	80.2	(4.9)	c	c
	Qatar	45.8	(0.8)	49.2	(1.8)	c	c	c	c	80.7	(0.6)	89.8	(1.1)	c	c	c	c
	Romania	59.0	(1.4)	68.3	(1.4)	57.1	(4.7)	c	c	73.2	(1.9)	81.1	(1.5)	91.2	(2.4)	c	c
	Russian Federation	52.4	(2.2)	55.7	(0.9)	53.2	(2.3)	47.1	(3.9)	74.5	(1.8)	74.8	(1.0)	76.3	(2.0)	81.5	(3.5)
	Serbia	48.1	(1.4)	45.3	(1.2)	37.8	(3.4)	c	c	60.3	(1.2)	66.3	(1.4)	79.8	(2.4)	c	c
	Slovenia	44.0	(2.3)	46.3	(1.2)	44.2	(1.7)	41.0	(2.6)	63.6	(2.7)	69.8	(1.1)	75.2	(1.6)	81.9	(2.0)
	Chinese Taipei	44.9	(1.8)	49.0	(0.9)	45.7	(1.2)	45.3	(1.6)	65.6	(2.2)	73.6	(1.0)	82.8	(0.9)	89.4	(0.9)
	Thailand	59.6	(1.3)	53.3	(1.3)	32.3	(5.9)	c	c	96.1	(0.5)	98.5	(0.3)	99.0	(0.8)	c	c
	Tunisia	54.6	(1.5)	33.1	(1.9)	c	c	c	c	88.1	(0.9)	92.5	(1.0)	c	c	c	c
	Uruguay	48.0	(1.6)	46.0	(1.3)	38.4	(4.1)	c	c	80.1	(1.6)	84.2	(1.3)	89.2	(2.8)	c	c



[Part 3/3]

Table A3.7 Importance of doing well in science, mathematics and reading, by performance group

		Students reporting doing well in mathematics is very important or important								Students reporting doing well in reading is very important or important							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	88.9	(1.1)	93.0	(0.5)	95.6	(0.5)	96.3	(0.6)	90.6	(1.0)	95.0	(0.4)	95.1	(0.6)	94.8	(0.7)
	Austria	89.3	(1.6)	91.4	(0.6)	91.5	(1.1)	92.2	(1.2)	89.9	(1.3)	90.0	(0.9)	87.0	(1.4)	83.2	(2.4)
	Belgium	81.4	(3.0)	89.5	(0.6)	93.3	(1.0)	93.3	(1.2)	85.0	(3.3)	87.6	(0.6)	78.1	(1.2)	68.2	(2.2)
	Canada	91.8	(1.2)	95.1	(0.4)	96.0	(0.6)	97.0	(0.7)	89.9	(1.2)	91.3	(0.5)	90.3	(0.7)	86.8	(1.2)
	Czech Republic	86.4	(1.9)	89.7	(0.8)	90.3	(1.2)	89.1	(1.3)	85.4	(2.6)	90.3	(0.8)	89.9	(1.0)	83.0	(1.7)
	Denmark	95.9	(0.9)	96.7	(0.5)	97.6	(0.7)	97.6	(1.3)	96.5	(0.8)	97.1	(0.4)	95.2	(0.9)	93.4	(2.4)
	Finland	73.9	(3.6)	81.4	(1.1)	88.7	(1.0)	93.3	(0.9)	72.7	(3.8)	78.3	(1.2)	81.2	(1.3)	80.1	(1.6)
	France	87.3	(1.2)	89.6	(0.8)	91.0	(1.0)	92.5	(1.4)	89.6	(1.4)	86.3	(0.8)	76.4	(1.5)	69.6	(2.8)
	Germany	92.3	(1.0)	94.9	(0.5)	94.4	(0.7)	95.2	(1.2)	92.8	(1.6)	94.7	(0.6)	90.7	(1.1)	84.8	(1.6)
	Greece	82.6	(1.7)	86.3	(0.7)	89.7	(1.3)	95.0	(1.9)	77.2	(2.0)	81.5	(0.8)	78.6	(1.9)	75.5	(5.1)
	Hungary	79.4	(2.3)	83.1	(1.0)	85.7	(1.4)	87.1	(2.3)	77.5	(2.2)	84.8	(0.9)	81.9	(1.8)	76.8	(3.4)
	Iceland	94.4	(0.8)	98.4	(0.3)	98.8	(0.5)	99.0	(0.7)	91.7	(1.2)	92.8	(0.6)	89.0	(1.4)	90.8	(1.9)
	Ireland	93.8	(1.2)	96.4	(0.4)	96.0	(0.8)	95.3	(1.1)	93.6	(1.4)	94.4	(0.6)	92.0	(1.1)	86.3	(1.9)
	Italy	87.7	(0.8)	91.0	(0.6)	92.3	(1.1)	95.7	(1.1)	92.2	(0.7)	94.0	(0.4)	90.9	(0.9)	87.9	(1.5)
	Japan	74.7	(1.8)	85.5	(0.8)	91.6	(0.9)	94.2	(1.0)	84.8	(1.5)	89.1	(0.8)	88.5	(1.0)	86.2	(1.4)
	Korea	79.7	(2.2)	86.5	(0.8)	91.4	(0.9)	94.4	(1.3)	86.5	(1.6)	93.3	(0.6)	93.4	(1.0)	91.8	(2.1)
	Luxembourg	86.3	(1.4)	83.8	(0.8)	84.8	(1.4)	89.3	(2.5)	89.1	(1.1)	86.9	(0.8)	82.1	(1.3)	81.1	(2.6)
	Mexico	96.3	(0.5)	98.5	(0.2)	98.8	(0.6)	c	c	96.0	(0.5)	96.8	(0.3)	93.5	(1.7)	c	c
	Netherlands	83.2	(1.9)	87.8	(0.9)	92.5	(1.0)	94.6	(1.3)	90.4	(1.7)	91.8	(0.6)	83.4	(1.7)	70.7	(2.3)
	New Zealand	91.6	(1.2)	94.6	(0.5)	96.2	(0.9)	97.0	(0.8)	91.6	(1.6)	94.2	(0.7)	93.1	(0.8)	91.8	(0.9)
	Norway	83.9	(1.4)	91.3	(0.7)	95.4	(0.8)	98.0	(1.1)	77.0	(1.8)	85.7	(0.9)	84.7	(2.1)	84.7	(3.3)
	Poland	82.2	(1.5)	85.7	(0.8)	90.6	(1.1)	90.2	(2.1)	86.6	(1.4)	89.8	(0.6)	87.7	(1.2)	82.7	(2.5)
	Portugal	84.4	(1.4)	89.9	(0.8)	97.0	(1.0)	98.3	(1.5)	91.7	(1.1)	89.1	(0.8)	80.4	(2.2)	73.6	(4.5)
	Slovak Republic	85.3	(1.7)	87.0	(1.0)	91.0	(1.1)	91.4	(1.9)	88.8	(1.4)	93.0	(0.6)	90.8	(1.3)	80.6	(2.7)
	Spain	80.0	(1.3)	89.4	(0.5)	94.2	(0.9)	95.1	(1.7)	82.0	(1.3)	86.7	(0.7)	81.1	(1.2)	79.0	(2.2)
	Sweden	94.1	(1.2)	94.8	(0.6)	95.0	(0.9)	96.9	(1.1)	92.8	(1.6)	95.1	(0.5)	93.2	(1.2)	91.9	(1.8)
	Switzerland	92.9	(0.9)	93.6	(0.5)	91.0	(0.9)	89.1	(1.9)	94.4	(1.0)	92.5	(0.7)	86.9	(1.2)	81.1	(1.9)
	Turkey	90.9	(0.8)	94.4	(0.6)	96.4	(1.7)	c	c	96.1	(0.5)	93.0	(0.8)	81.8	(2.6)	c	c
	United Kingdom	94.5	(0.8)	96.3	(0.5)	96.3	(0.6)	96.8	(0.6)	95.0	(0.9)	96.8	(0.4)	95.1	(0.9)	90.9	(1.3)
	United States	90.9	(1.0)	94.3	(0.6)	95.3	(0.9)	97.0	(0.8)	89.4	(1.0)	90.3	(0.8)	89.7	(1.4)	87.3	(1.8)
	OECD average	86.7	(0.3)	90.6	(0.1)	93.0	(0.2)	94.3	(0.3)	88.0	(0.3)	90.4	(0.1)	87.4	(0.2)	83.4	(0.5)
Partners	Argentina	90.2	(0.8)	93.9	(0.8)	92.0	(2.7)	c	c	88.5	(1.0)	88.7	(1.2)	83.5	(3.4)	c	c
	Azerbaijan	87.9	(0.8)	90.1	(1.1)	c	c	c	c	91.6	(0.8)	94.1	(0.8)	c	c	c	c
	Brazil	93.4	(0.5)	94.7	(0.7)	93.2	(2.3)	c	c	95.2	(0.5)	96.0	(0.4)	91.5	(2.6)	c	c
	Bulgaria	90.3	(0.9)	92.6	(0.9)	93.6	(1.6)	93.0	(2.5)	90.4	(1.1)	95.3	(0.6)	95.4	(1.2)	86.4	(5.2)
	Chile	95.2	(0.6)	97.4	(0.4)	98.1	(0.7)	c	c	95.6	(0.6)	94.5	(0.5)	89.2	(1.7)	c	c
	Colombia	94.4	(0.6)	97.2	(0.6)	c	c	c	c	94.7	(0.7)	93.5	(1.0)	c	c	c	c
	Croatia	79.7	(1.9)	81.0	(1.2)	79.8	(2.1)	85.2	(3.0)	82.5	(2.0)	85.9	(1.0)	81.2	(1.5)	74.3	(2.8)
	Estonia	86.9	(2.1)	92.8	(0.6)	93.1	(1.0)	95.2	(1.1)	87.9	(2.4)	92.1	(0.6)	92.9	(0.9)	91.0	(1.4)
	Hong Kong-China	83.0	(3.0)	89.4	(0.9)	95.1	(0.8)	97.2	(0.7)	89.5	(2.3)	91.7	(0.9)	91.1	(1.0)	89.8	(1.2)
	Indonesia	95.6	(0.4)	97.1	(0.5)	c	c	c	c	97.2	(0.3)	94.2	(0.8)	c	c	c	c
	Israel	89.9	(1.1)	94.5	(0.9)	95.8	(1.1)	93.2	(2.4)	84.2	(1.1)	87.5	(1.0)	81.8	(1.9)	72.2	(3.2)
	Jordan	85.7	(1.0)	92.4	(0.7)	97.8	(1.1)	c	c	86.5	(1.2)	88.2	(0.8)	85.5	(2.6)	c	c
	Kyrgyzstan	93.7	(0.4)	93.1	(1.3)	c	c	c	c	94.1	(0.4)	93.5	(1.4)	c	c	c	c
	Latvia	92.9	(1.4)	93.9	(0.5)	95.0	(1.0)	95.4	(1.6)	92.9	(1.1)	91.9	(0.8)	89.3	(1.2)	80.1	(3.3)
	Liechtenstein	95.9	(3.6)	93.6	(1.9)	89.7	(3.8)	91.9	(4.8)	86.4	(6.4)	90.1	(2.7)	82.9	(4.8)	86.1	(5.7)
	Lithuania	90.9	(1.1)	93.6	(0.6)	97.6	(0.6)	96.7	(1.6)	93.3	(1.1)	94.2	(0.6)	92.5	(1.1)	90.9	(2.1)
	Macao-China	84.7	(2.0)	85.9	(1.0)	87.7	(2.2)	85.2	(5.8)	92.7	(1.4)	93.9	(0.7)	91.6	(1.3)	93.0	(2.5)
	Montenegro	77.1	(1.2)	75.1	(1.2)	79.4	(4.6)	c	c	85.3	(0.8)	88.0	(0.9)	85.5	(4.6)	c	c
	Qatar	78.2	(0.7)	91.9	(1.0)	c	c	c	c	74.9	(0.7)	81.8	(1.2)	c	c	c	c
	Romania	87.5	(1.3)	91.4	(1.0)	91.7	(3.2)	c	c	91.7	(0.8)	95.1	(0.7)	89.1	(3.1)	c	c
	Russian Federation	90.8	(1.2)	92.1	(0.8)	92.3	(1.6)	93.8	(1.8)	92.9	(1.1)	92.8	(0.6)	92.3	(1.2)	90.2	(2.3)
	Serbia	73.8	(1.4)	75.1	(1.2)	82.9	(2.5)	c	c	85.7	(1.1)	85.8	(0.8)	77.7	(2.8)	c	c
	Slovenia	87.2	(1.9)	87.7	(0.7)	90.1	(1.1)	93.5	(1.2)	85.4	(1.5)	88.7	(0.8)	86.1	(1.5)	83.7	(1.7)
	Chinese Taipei	73.7	(2.5)	80.4	(1.0)	88.1	(0.8)	91.6	(0.9)	87.7	(1.2)	89.7	(0.7)	86.5	(0.8)	85.2	(1.3)
	Thailand	97.1	(0.4)	98.8	(0.2)	99.4	(0.7)	c	c	97.1	(0.4)	95.7	(0.5)	83.3	(3.5)	c	c
	Tunisia	83.0	(0.9)	89.3	(1.1)	c	c	c	c	81.6	(1.0)	63.7	(1.8)	c	c	c	c
	Uruguay	90.1	(1.0)	92.7	(0.7)	96.2	(1.2)	c	c	85.0	(1.1)	84.9	(1.0)	79.7	(3.0)	c	c

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[Part 1/1]

Table A3.8a Self-efficacy in science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.66	(0.03)	-0.13	(0.01)	0.46	(0.02)	1.01	(0.03)	**-0.55**	(0.03)
	Austria	-0.69	(0.06)	-0.27	(0.02)	0.25	(0.03)	0.73	(0.05)	**-0.47**	(0.06)
	Belgium	-0.62	(0.05)	-0.24	(0.02)	0.28	(0.02)	0.69	(0.03)	**-0.41**	(0.04)
	Canada	-0.52	(0.05)	-0.04	(0.02)	0.49	(0.02)	0.99	(0.04)	**-0.50**	(0.04)
	Czech Republic	-0.32	(0.04)	0.03	(0.03)	0.37	(0.04)	0.72	(0.04)	**-0.34**	(0.06)
	Denmark	-0.69	(0.04)	-0.19	(0.03)	0.46	(0.04)	0.87	(0.06)	**-0.41**	(0.06)
	Finland	-0.66	(0.10)	-0.31	(0.03)	0.17	(0.03)	0.62	(0.03)	**-0.45**	(0.04)
	France	-0.55	(0.04)	-0.14	(0.02)	0.33	(0.03)	0.75	(0.06)	**-0.42**	(0.06)
	Germany	-0.63	(0.07)	-0.10	(0.02)	0.36	(0.03)	0.83	(0.05)	**-0.47**	(0.06)
	Greece	-0.46	(0.03)	-0.15	(0.02)	0.34	(0.04)	0.62	(0.07)	**-0.29**	(0.08)
	Hungary	-0.41	(0.05)	-0.13	(0.02)	0.21	(0.03)	0.53	(0.06)	**-0.32**	(0.07)
	Iceland	-0.59	(0.05)	0.07	(0.02)	0.73	(0.04)	1.16	(0.08)	**-0.44**	(0.09)
	Ireland	-0.67	(0.05)	-0.13	(0.02)	0.45	(0.03)	0.84	(0.05)	**-0.38**	(0.06)
	Italy	-0.47	(0.02)	-0.20	(0.01)	0.07	(0.03)	0.32	(0.04)	**-0.25**	(0.05)
	Japan	-1.15	(0.05)	-0.62	(0.02)	-0.36	(0.03)	-0.07	(0.04)	**-0.29**	(0.05)
	Korea	-0.81	(0.06)	-0.32	(0.02)	0.04	(0.03)	0.34	(0.05)	**-0.30**	(0.05)
	Luxembourg	-0.54	(0.04)	-0.21	(0.02)	0.30	(0.04)	0.74	(0.06)	**-0.44**	(0.08)
	Mexico	-0.07	(0.02)	0.23	(0.02)	0.67	(0.05)	c	c	c	c
	Netherlands	-0.38	(0.07)	-0.17	(0.03)	0.24	(0.03)	0.64	(0.04)	**-0.39**	(0.06)
	New Zealand	-0.76	(0.05)	-0.32	(0.02)	0.30	(0.03)	0.86	(0.04)	**-0.57**	(0.05)
	Norway	-0.39	(0.04)	0.09	(0.02)	0.55	(0.03)	0.91	(0.06)	**-0.37**	(0.06)
	Poland	-0.29	(0.03)	0.16	(0.02)	0.71	(0.03)	1.15	(0.05)	**-0.44**	(0.06)
	Portugal	-0.14	(0.03)	0.19	(0.02)	0.66	(0.05)	1.01	(0.10)	**-0.35**	(0.11)
	Slovak Republic	-0.24	(0.05)	0.06	(0.02)	0.43	(0.04)	0.67	(0.06)	**-0.23**	(0.06)
	Spain	-0.65	(0.04)	-0.11	(0.02)	0.45	(0.03)	0.84	(0.05)	**-0.39**	(0.05)
	Sweden	-0.70	(0.08)	-0.16	(0.02)	0.33	(0.05)	0.78	(0.08)	**-0.45**	(0.11)
	Switzerland	-0.72	(0.05)	-0.34	(0.02)	0.15	(0.03)	0.57	(0.04)	**-0.42**	(0.06)
	Turkey	-0.28	(0.03)	0.18	(0.03)	0.83	(0.07)	c	c	c	c
	United Kingdom	-0.53	(0.04)	-0.03	(0.02)	0.58	(0.03)	1.16	(0.04)	**-0.58**	(0.05)
	United States	-0.24	(0.07)	0.09	(0.03)	0.69	(0.04)	1.18	(0.05)	**-0.49**	(0.06)
	OECD average	-0.55	(0.01)	-0.13	(0.00)	0.36	(0.01)	0.77	(0.01)	**-0.41**	(0.01)
Partners	Argentina	-0.20	(0.03)	0.11	(0.03)	0.43	(0.08)	c	c	c	c
	Azerbaijan	-0.54	(0.04)	-0.24	(0.05)	c	c	c	c	c	c
	Brazil	-0.24	(0.02)	0.18	(0.02)	0.68	(0.06)	c	c	c	c
	Bulgaria	-0.35	(0.03)	0.06	(0.03)	0.47	(0.04)	0.81	(0.08)	**-0.34**	(0.10)
	Chile	-0.21	(0.03)	0.16	(0.03)	0.61	(0.05)	c	c	c	c
	Colombia	-0.05	(0.02)	0.28	(0.04)	c	c	c	c	c	c
	Croatia	-0.36	(0.04)	0.08	(0.02)	0.60	(0.03)	0.98	(0.06)	**-0.38**	(0.06)
	Estonia	-0.55	(0.06)	-0.16	(0.02)	0.27	(0.03)	0.71	(0.05)	**-0.44**	(0.05)
	Hong Kong-China	-0.58	(0.06)	-0.12	(0.03)	0.27	(0.03)	0.58	(0.03)	**-0.31**	(0.04)
	Indonesia	-0.78	(0.03)	-0.58	(0.02)	c	c	c	c	c	c
	Israel	-0.20	(0.05)	0.02	(0.04)	0.37	(0.05)	0.55	(0.08)	-0.18	(0.09)
	Jordan	0.04	(0.03)	0.30	(0.03)	0.73	(0.07)	c	c	c	c
	Kyrgyzstan	-0.17	(0.02)	-0.02	(0.05)	c	c	c	c	c	c
	Latvia	-0.36	(0.04)	-0.07	(0.02)	0.35	(0.05)	0.76	(0.08)	**-0.41**	(0.09)
	Liechtenstein	-0.79	(0.16)	-0.23	(0.09)	0.10	(0.10)	0.60	(0.19)	**-0.50**	(0.23)
	Lithuania	-0.37	(0.04)	-0.01	(0.02)	0.34	(0.03)	0.63	(0.07)	**-0.30**	(0.08)
	Macao-China	-0.52	(0.06)	-0.22	(0.02)	0.23	(0.03)	0.52	(0.07)	**-0.29**	(0.08)
	Montenegro	-0.33	(0.02)	0.23	(0.03)	0.91	(0.11)	c	c	c	c
	Qatar	-0.19	(0.02)	0.21	(0.03)	c	c	c	c	c	c
	Romania	-0.56	(0.04)	-0.21	(0.03)	0.30	(0.07)	c	c	c	c
	Russian Federation	-0.41	(0.07)	-0.02	(0.03)	0.41	(0.05)	0.76	(0.09)	**-0.35**	(0.11)
	Serbia	-0.24	(0.03)	0.17	(0.02)	0.75	(0.08)	c	c	c	c
	Slovenia	-0.53	(0.05)	-0.27	(0.02)	0.16	(0.03)	0.53	(0.05)	**-0.37**	(0.06)
	Chinese Taipei	-0.46	(0.06)	0.01	(0.02)	0.42	(0.02)	0.75	(0.03)	**-0.33**	(0.04)
	Thailand	-0.04	(0.02)	0.12	(0.02)	0.46	(0.06)	c	c	c	c
	Tunisia	-0.21	(0.02)	0.05	(0.03)	c	c	c	c	c	c
	Uruguay	-0.13	(0.03)	0.24	(0.03)	0.66	(0.05)	c	c	c	c



[Part 1/4]

Table A3.8b Self-efficacy in science (underlying percentages), by performance group

		Percentage of students who believe they can perform the following tasks either easily or with a bit of effort															
		Recognise the science question that underlies a newspaper report on a health issue								Explain why earthquakes occur more frequently in some areas than in others							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	52.6	(1.6)	74.0	(0.7)	89.6	(0.7)	96.5	(0.6)	53.9	(1.4)	73.5	(0.7)	89.7	(0.7)	96.0	(0.5)
	Austria	53.4	(2.6)	69.3	(1.1)	86.6	(1.2)	92.3	(1.7)	52.1	(2.6)	76.5	(0.9)	90.2	(1.0)	97.0	(0.8)
	Belgium	58.7	(2.3)	68.9	(1.0)	83.3	(1.2)	91.4	(1.4)	51.4	(2.3)	63.4	(1.0)	75.9	(1.3)	85.1	(1.4)
	Canada	55.4	(1.9)	71.8	(0.9)	86.8	(1.0)	94.9	(0.9)	55.5	(2.1)	69.9	(0.8)	83.6	(0.9)	93.2	(0.9)
	Czech Republic	61.6	(2.7)	78.1	(1.0)	90.3	(1.2)	94.9	(1.0)	63.0	(2.4)	79.0	(1.1)	89.4	(1.3)	96.2	(1.1)
	Denmark	59.9	(2.3)	75.9	(1.1)	90.9	(1.3)	95.9	(1.3)	62.2	(1.7)	76.1	(1.0)	90.0	(1.1)	95.3	(1.5)
	Finland	59.5	(4.4)	68.2	(1.2)	81.8	(1.0)	91.0	(1.2)	58.6	(4.4)	74.5	(1.0)	89.2	(0.8)	97.0	(0.7)
	France	54.4	(1.9)	60.8	(1.3)	78.2	(1.5)	88.8	(2.0)	60.6	(1.8)	78.7	(0.9)	90.5	(1.1)	95.2	(1.1)
	Germany	55.2	(3.4)	74.7	(1.0)	87.7	(1.0)	94.5	(0.9)	64.4	(2.5)	80.4	(1.0)	90.1	(1.0)	96.7	(0.8)
	Greece	57.2	(1.7)	67.1	(1.1)	79.8	(2.2)	88.3	(2.9)	51.3	(1.8)	67.3	(1.0)	84.6	(1.9)	91.0	(2.8)
	Hungary	64.5	(2.8)	69.0	(1.1)	80.1	(1.6)	88.0	(2.0)	48.4	(2.5)	68.1	(1.1)	83.5	(1.4)	91.8	(2.2)
	Iceland	50.2	(2.1)	71.6	(1.1)	89.0	(1.3)	95.5	(1.7)	57.5	(1.8)	79.8	(0.9)	94.3	(1.0)	98.2	(1.2)
	Ireland	50.2	(2.0)	63.4	(1.3)	81.4	(1.5)	93.1	(1.4)	61.0	(2.1)	79.6	(1.1)	92.5	(1.1)	96.8	(1.1)
	Italy	58.3	(1.2)	70.4	(0.7)	80.3	(1.2)	86.5	(1.7)	67.0	(1.4)	77.4	(0.7)	85.5	(1.2)	89.9	(1.6)
	Japan	43.6	(1.7)	61.6	(1.1)	69.6	(1.5)	78.5	(1.8)	35.5	(2.0)	55.8	(1.1)	72.4	(1.2)	84.8	(1.6)
	Korea	47.3	(2.2)	63.4	(1.1)	78.7	(1.4)	89.9	(1.3)	43.1	(2.5)	67.4	(1.1)	86.2	(1.3)	93.2	(1.2)
	Luxembourg	59.3	(1.7)	69.4	(1.0)	82.9	(1.4)	92.9	(1.7)	60.4	(1.6)	78.9	(0.9)	92.0	(1.3)	96.8	(1.3)
	Mexico	72.5	(1.0)	82.3	(0.8)	91.7	(2.1)	c	c	67.4	(1.0)	79.4	(0.8)	89.3	(2.0)	c	c
	Netherlands	72.7	(2.5)	72.9	(1.3)	83.2	(1.2)	92.5	(1.2)	66.4	(3.1)	77.7	(1.2)	90.4	(1.1)	93.7	(1.3)
	New Zealand	48.6	(2.3)	64.9	(0.9)	84.3	(1.2)	94.4	(0.9)	48.6	(2.1)	73.3	(1.2)	88.8	(1.4)	96.1	(0.9)
	Norway	50.3	(2.1)	62.5	(1.2)	80.3	(1.9)	90.3	(2.3)	58.2	(2.0)	79.4	(0.9)	91.6	(1.1)	95.7	(1.9)
	Poland	61.7	(1.9)	74.7	(1.0)	87.7	(1.2)	95.2	(1.4)	54.6	(2.0)	74.2	(0.9)	91.6	(1.1)	97.2	(1.3)
	Portugal	62.7	(1.7)	75.6	(1.0)	89.0	(1.4)	95.8	(2.0)	62.5	(1.7)	75.6	(1.0)	91.4	(1.7)	95.5	(2.3)
	Slovak Republic	73.6	(2.1)	82.8	(0.8)	91.4	(1.5)	94.3	(2.0)	59.0	(2.3)	75.8	(1.0)	90.2	(1.6)	94.0	(1.5)
	Spain	44.7	(2.3)	58.8	(0.9)	75.9	(1.2)	86.5	(1.8)	52.8	(1.6)	73.5	(1.0)	88.7	(1.0)	94.6	(1.1)
	Sweden	48.4	(2.7)	63.0	(1.5)	80.1	(2.3)	92.7	(2.0)	60.2	(2.8)	79.7	(1.2)	90.9	(1.7)	96.7	(1.5)
	Switzerland	51.4	(2.2)	64.0	(1.1)	81.1	(1.2)	91.0	(1.4)	56.4	(2.0)	75.2	(0.8)	88.4	(1.1)	92.8	(1.2)
	Turkey	69.5	(1.4)	80.5	(1.2)	91.9	(2.3)	c	c	63.6	(1.4)	80.1	(1.3)	91.7	(2.0)	c	c
	United Kingdom	58.4	(2.3)	76.2	(1.1)	90.9	(1.1)	97.0	(0.9)	49.9	(1.8)	71.3	(0.8)	89.8	(0.9)	96.1	(0.7)
	United States	66.7	(2.1)	77.3	(1.0)	91.2	(0.9)	96.8	(1.0)	61.7	(1.9)	74.6	(1.2)	89.7	(1.1)	95.3	(1.1)
	OECD average	56.5	(0.4)	69.6	(0.2)	84.0	(0.3)	92.1	(0.3)	56.3	(0.4)	74.2	(0.2)	88.3	(0.2)	94.4	(0.3)
Partners	Argentina	67.2	(1.7)	79.8	(1.4)	89.8	(3.3)	c	c	59.9	(1.4)	72.6	(1.7)	80.0	(4.1)	c	c
	Azerbaijan	63.1	(1.5)	70.4	(1.8)	c	c	c	c	48.1	(1.2)	62.0	(1.9)	c	c	c	c
	Brazil	69.3	(1.3)	84.6	(0.9)	95.8	(1.5)	c	c	53.8	(1.2)	73.3	(1.6)	91.0	(3.0)	c	c
	Bulgaria	63.0	(1.1)	73.0	(1.3)	88.1	(1.9)	93.4	(2.5)	52.3	(1.4)	71.7	(1.1)	86.8	(1.9)	90.7	(2.9)
	Chile	58.9	(1.3)	70.4	(1.1)	82.9	(2.3)	c	c	63.8	(1.5)	80.8	(1.0)	89.0	(1.9)	c	c
	Colombia	64.9	(1.1)	74.4	(1.8)	c	c	c	c	61.0	(1.0)	71.8	(1.5)	c	c	c	c
	Croatia	65.5	(1.7)	76.8	(0.9)	91.0	(1.1)	95.4	(1.6)	55.8	(2.4)	70.8	(1.1)	87.5	(1.5)	94.8	(1.7)
	Estonia	59.4	(2.9)	75.1	(1.1)	87.2	(1.0)	93.8	(1.1)	46.0	(4.0)	65.3	(1.2)	81.8	(1.6)	91.1	(1.5)
	Hong Kong-China	61.0	(3.0)	75.6	(1.1)	85.0	(1.0)	91.3	(1.3)	44.2	(3.6)	62.5	(1.3)	79.6	(1.3)	86.6	(1.4)
	Indonesia	56.7	(1.1)	65.1	(1.4)	c	c	c	c	40.0	(1.2)	47.2	(1.4)	c	c	c	c
	Israel	72.2	(1.6)	80.8	(1.1)	90.4	(1.5)	92.4	(2.8)	57.5	(1.8)	66.2	(1.5)	78.3	(2.1)	86.4	(3.1)
	Jordan	68.2	(1.4)	77.3	(1.2)	88.7	(2.6)	c	c	64.6	(1.2)	78.6	(1.0)	89.5	(2.2)	c	c
	Kyrgyzstan	81.7	(0.9)	79.1	(2.0)	c	c	c	c	59.4	(0.9)	68.9	(2.3)	c	c	c	c
	Latvia	69.1	(2.0)	75.1	(1.0)	83.9	(1.6)	88.8	(3.0)	56.9	(2.7)	77.0	(1.1)	92.0	(1.5)	96.8	(1.6)
	Liechtenstein	38.4	(7.1)	62.5	(4.0)	76.5	(5.9)	82.5	(7.5)	46.1	(9.3)	75.1	(3.8)	75.0	(4.7)	94.4	(4.7)
	Lithuania	69.0	(1.9)	81.9	(1.0)	88.9	(1.7)	93.5	(1.8)	61.0	(1.9)	81.1	(1.0)	94.1	(1.0)	98.0	(1.1)
	Macao-China	58.3	(2.7)	67.3	(0.9)	78.7	(1.8)	86.8	(2.7)	47.7	(3.1)	65.3	(0.9)	86.2	(1.2)	93.0	(2.3)
	Montenegro	60.6	(1.1)	74.4	(1.2)	87.5	(3.7)	c	c	56.1	(1.1)	77.0	(1.0)	92.6	(2.7)	c	c
	Qatar	70.1	(0.6)	83.4	(1.2)	c	c	c	c	62.7	(0.8)	77.1	(1.7)	c	c	c	c
	Romania	63.8	(1.8)	70.5	(1.3)	83.2	(3.0)	c	c	46.6	(1.7)	63.9	(1.7)	83.9	(3.6)	c	c
	Russian Federation	57.5	(2.0)	69.3	(1.4)	79.8	(1.9)	85.5	(3.3)	53.2	(2.5)	68.7	(1.2)	81.4	(1.8)	90.2	(2.6)
	Serbia	68.0	(1.4)	77.4	(1.1)	88.8	(2.0)	c	c	51.5	(1.3)	69.6	(1.1)	85.9	(2.3)	c	c
	Slovenia	59.6	(2.4)	69.0	(1.1)	83.2	(1.9)	90.3	(1.6)	53.6	(2.3)	69.2	(1.1)	86.6	(1.3)	93.6	(1.4)
	Chinese Taipei	54.1	(2.1)	69.8	(0.9)	82.0	(1.0)	88.5	(1.3)	48.8	(2.4)	70.5	(0.7)	86.4	(0.8)	91.3	(1.2)
	Thailand	84.9	(0.9)	88.2	(0.9)	93.0	(2.4)	c	c	66.9	(1.3)	79.1	(1.2)	90.6	(2.7)	c	c
	Tunisia	67.7	(1.2)	79.7	(1.5)	c	c	c	c	45.7	(1.0)	62.5	(1.4)	c	c	c	c
	Uruguay	73.9	(1.4)	83.8	(1.2)	93.2	(2.1)	c	c	63.6	(1.4)	75.3	(1.2)	84.1	(2.3)	c	c



[Part 2/4]

Table A3.8b Self-efficacy in science (underlying percentages), by performance group

		Percentage of students who believe they can perform the following tasks either easily or with a bit of effort															
		Describe the role of antibiotics in the treatment of disease								Identify the science question associated with the disposal of garbage							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	35.3	(1.4)	50.7	(0.8)	73.2	(1.2)	85.5	(1.2)	42.8	(1.3)	55.9	(0.7)	69.1	(1.1)	82.8	(1.1)
	Austria	39.7	(3.0)	49.7	(1.3)	64.4	(1.7)	77.6	(2.6)	49.5	(2.5)	60.0	(1.1)	70.7	(1.5)	79.6	(2.2)
	Belgium	43.4	(1.8)	52.1	(1.1)	67.3	(1.5)	79.6	(1.7)	39.9	(1.7)	47.1	(1.0)	58.9	(1.4)	67.4	(1.9)
	Canada	39.9	(2.3)	50.0	(0.9)	68.7	(1.1)	82.8	(1.2)	45.6	(1.9)	58.2	(0.9)	70.9	(1.0)	79.8	(1.5)
	Czech Republic	60.0	(2.2)	68.3	(1.3)	76.5	(1.8)	83.1	(2.4)	50.6	(2.3)	57.4	(1.4)	64.1	(1.7)	74.4	(2.4)
	Denmark	31.1	(1.8)	37.3	(1.1)	55.2	(2.1)	68.1	(3.2)	38.2	(2.0)	49.9	(1.3)	69.8	(1.9)	79.4	(3.2)
	Finland	31.5	(3.9)	40.4	(1.3)	59.6	(1.8)	72.9	(1.9)	44.6	(4.9)	52.3	(1.3)	68.5	(1.4)	81.8	(1.7)
	France	53.0	(1.7)	70.1	(1.0)	78.2	(1.3)	85.1	(2.1)	39.2	(1.7)	48.2	(1.2)	63.0	(2.0)	76.3	(2.4)
	Germany	46.6	(2.6)	57.8	(1.2)	74.5	(1.3)	85.2	(1.8)	45.3	(2.6)	58.7	(1.3)	67.8	(1.6)	79.0	(2.0)
	Greece	42.7	(1.7)	55.8	(1.2)	77.2	(2.0)	84.9	(3.3)	56.9	(1.5)	60.5	(1.0)	68.7	(2.1)	74.0	(4.3)
	Hungary	45.5	(2.4)	60.4	(1.3)	73.3	(1.8)	83.3	(2.7)	66.1	(2.1)	72.9	(1.0)	77.7	(1.4)	84.4	(2.2)
	Iceland	46.1	(1.8)	61.5	(1.1)	77.1	(2.0)	82.0	(3.0)	43.5	(2.1)	56.7	(1.3)	71.7	(2.2)	80.8	(3.1)
	Ireland	36.3	(2.2)	49.6	(1.3)	70.4	(1.8)	78.8	(2.4)	52.7	(2.4)	66.6	(1.1)	78.5	(1.5)	85.3	(2.4)
	Italy	37.7	(1.1)	44.8	(0.9)	55.2	(1.9)	66.1	(3.5)	50.1	(1.4)	57.0	(0.8)	62.9	(1.4)	72.1	(1.8)
	Japan	22.3	(1.8)	29.8	(1.2)	37.2	(1.5)	47.0	(2.1)	46.9	(1.9)	60.8	(1.1)	63.6	(1.7)	69.3	(1.7)
	Korea	38.9	(2.4)	50.5	(1.1)	63.7	(1.4)	76.3	(2.3)	53.5	(2.7)	63.8	(1.2)	69.4	(1.9)	70.9	(2.7)
	Luxembourg	40.7	(1.8)	54.9	(1.1)	76.4	(2.1)	85.9	(2.2)	43.8	(1.7)	56.9	(1.2)	69.3	(3.0)	74.2	(3.2)
	Mexico	55.0	(1.1)	57.6	(1.0)	67.9	(3.3)	c	c	75.0	(0.9)	79.5	(0.7)	82.4	(3.1)	c	c
	Netherlands	51.7	(3.4)	59.9	(1.3)	75.4	(1.5)	83.7	(2.0)	53.1	(2.7)	56.0	(1.5)	62.4	(1.9)	71.5	(2.0)
	New Zealand	31.0	(2.4)	44.8	(1.4)	73.9	(1.9)	86.9	(1.9)	40.0	(2.5)	50.0	(1.2)	66.1	(1.9)	79.8	(1.9)
	Norway	62.1	(1.9)	77.8	(1.0)	87.8	(1.3)	90.5	(2.2)	51.4	(2.1)	67.4	(1.0)	81.8	(1.6)	89.1	(2.4)
	Poland	56.3	(2.1)	71.7	(0.9)	82.2	(1.5)	90.6	(1.6)	45.8	(2.0)	59.6	(1.2)	74.0	(1.8)	83.5	(2.9)
	Portugal	50.1	(1.7)	60.7	(1.1)	76.7	(2.0)	84.0	(4.2)	70.9	(1.5)	76.2	(1.0)	79.7	(2.1)	84.9	(4.4)
	Slovak Republic	55.1	(3.0)	61.0	(1.2)	71.5	(2.2)	74.5	(3.2)	52.2	(2.4)	59.8	(1.2)	70.7	(1.9)	75.3	(3.0)
	Spain	40.1	(1.7)	51.3	(0.9)	70.9	(1.5)	80.1	(2.5)	45.4	(1.8)	53.6	(1.0)	65.7	(1.8)	72.5	(2.5)
	Sweden	39.5	(2.2)	50.4	(1.1)	63.4	(2.5)	75.7	(2.8)	37.2	(2.2)	55.3	(1.1)	70.9	(2.2)	84.4	(3.1)
	Switzerland	38.1	(1.7)	46.7	(1.0)	63.3	(1.5)	75.7	(2.0)	38.8	(1.6)	50.0	(0.9)	64.7	(1.7)	75.9	(2.2)
	Turkey	50.1	(1.3)	68.1	(1.3)	90.1	(2.3)	c	c	55.1	(1.3)	69.4	(1.2)	87.4	(1.8)	c	c
	United Kingdom	38.0	(1.8)	52.9	(1.1)	72.9	(1.5)	87.5	(1.3)	49.0	(1.6)	62.9	(1.0)	75.9	(1.7)	85.9	(1.5)
	United States	48.9	(2.1)	59.3	(1.2)	79.5	(1.5)	90.7	(1.8)	56.5	(2.5)	61.2	(1.1)	73.0	(1.9)	83.1	(2.0)
	OECD average	42.9	(0.4)	54.3	(0.2)	70.2	(0.3)	80.1	(0.5)	48.2	(0.4)	58.4	(0.2)	69.6	(0.3)	78.5	(0.5)
Partners	Argentina	46.3	(1.4)	51.7	(1.7)	59.6	(4.4)	c	c	62.7	(1.2)	61.4	(1.7)	64.2	(4.4)	c	c
	Azerbaijan	42.1	(1.7)	52.1	(1.7)	c	c	c	c	52.5	(1.3)	57.7	(1.9)	c	c	c	c
	Brazil	48.9	(1.0)	59.2	(1.2)	80.3	(2.8)	c	c	72.1	(1.0)	81.3	(1.2)	85.1	(3.1)	c	c
	Bulgaria	47.4	(1.5)	60.7	(1.4)	72.6	(2.4)	75.0	(4.1)	65.5	(1.5)	75.3	(1.1)	79.2	(2.1)	87.5	(3.0)
	Chile	49.7	(1.3)	58.0	(1.1)	71.6	(3.1)	c	c	55.6	(1.2)	61.3	(1.2)	68.3	(2.4)	c	c
	Colombia	55.9	(1.3)	64.0	(1.7)	c	c	c	c	71.9	(1.1)	79.4	(1.5)	c	c	c	c
	Croatia	58.2	(1.7)	73.7	(0.9)	86.6	(1.3)	93.5	(1.9)	61.7	(2.2)	74.4	(1.1)	85.0	(1.2)	91.3	(1.8)
	Estonia	41.3	(4.0)	53.3	(1.2)	66.9	(1.7)	77.7	(2.1)	57.8	(3.5)	64.8	(1.4)	75.1	(1.6)	83.4	(1.8)
	Hong Kong-China	37.8	(3.0)	49.9	(1.3)	60.2	(1.5)	73.3	(1.9)	51.8	(3.2)	67.5	(1.1)	77.7	(1.4)	84.1	(1.5)
	Indonesia	43.7	(1.4)	51.0	(1.6)	c	c	c	c	60.0	(1.1)	64.2	(1.5)	c	c	c	c
	Israel	50.0	(1.5)	58.5	(1.4)	69.6	(2.3)	76.0	(3.4)	58.6	(1.7)	66.1	(1.4)	71.5	(2.6)	73.7	(3.4)
	Jordan	62.1	(1.4)	74.9	(1.2)	89.3	(2.6)	c	c	72.3	(1.2)	76.6	(0.9)	79.7	(3.6)	c	c
	Kyrgyzstan	52.0	(1.1)	60.4	(2.2)	c	c	c	c	62.3	(1.0)	59.7	(1.9)	c	c	c	c
	Latvia	38.8	(3.2)	49.7	(1.4)	64.6	(2.6)	77.3	(5.1)	58.5	(3.3)	63.9	(1.3)	75.4	(2.4)	84.0	(3.6)
	Liechtenstein	31.8	(7.9)	51.2	(4.1)	72.3	(6.1)	80.4	(7.4)	35.6	(6.9)	53.4	(4.3)	68.8	(6.3)	77.9	(7.9)
	Lithuania	47.2	(1.8)	67.0	(1.1)	81.5	(1.4)	85.5	(2.5)	59.2	(1.7)	67.6	(1.2)	73.7	(2.2)	82.3	(3.7)
	Macao-China	39.8	(2.9)	44.4	(1.2)	60.3	(2.2)	73.7	(3.4)	59.1	(2.9)	66.2	(1.1)	74.9	(1.7)	81.1	(3.2)
	Montenegro	53.2	(1.1)	71.0	(1.2)	90.2	(3.8)	c	c	59.6	(1.2)	71.3	(1.3)	87.4	(4.1)	c	c
	Qatar	51.2	(0.8)	65.1	(1.5)	c	c	c	c	60.5	(0.8)	71.8	(1.6)	c	c	c	c
	Romania	39.3	(1.5)	51.0	(1.4)	64.5	(5.5)	c	c	44.7	(1.8)	54.4	(1.8)	62.0	(4.6)	c	c
	Russian Federation	48.7	(2.3)	60.1	(1.2)	70.8	(2.0)	76.9	(3.4)	59.6	(1.9)	70.4	(1.1)	81.1	(2.0)	88.0	(3.0)
	Serbia	48.2	(1.4)	63.0	(1.1)	75.0	(3.1)	c	c	66.4	(1.2)	72.4	(1.0)	82.5	(2.8)	c	c
	Slovenia	36.9	(1.9)	42.6	(1.2)	56.4	(2.1)	72.1	(2.2)	46.0	(2.4)	54.1	(1.1)	71.3	(1.9)	80.9	(2.2)
	Chinese Taipei	40.4	(2.2)	50.1	(1.0)	64.3	(1.2)	76.4	(1.6)	59.7	(2.2)	74.1	(0.9)	79.8	(1.1)	83.8	(1.2)
	Thailand	59.9	(1.3)	61.5	(1.1)	72.8	(2.9)	c	c	82.3	(0.8)	88.2	(0.7)	90.8	(2.3)	c	c
	Tunisia	43.1	(1.1)	50.8	(1.6)	c	c	c	c	65.8	(1.1)	68.2	(1.5)	c	c	c	c
	Uruguay	51.9	(1.4)	58.5	(1.3)	69.4	(2.8)	c	c	62.4	(1.6)	64.5	(1.3)	70.7	(3.0)	c	c

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Table A3.8b Self-efficacy in science (underlying percentages), by performance group

		Percentage of students who believe they can perform the following tasks either easily or with a bit of effort															
		Predict how changes to an environment will affect the survival of certain species								Interpret the scientific information provided on the labelling of food items							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	50.8	(1.5)	70.5	(0.7)	86.0	(0.7)	93.6	(0.6)	49.8	(1.6)	62.2	(0.7)	75.2	(1.0)	87.0	(1.1)
	Austria	44.1	(2.4)	57.2	(1.2)	72.2	(1.9)	81.2	(2.5)	38.9	(2.1)	48.0	(1.1)	63.4	(1.9)	76.6	(2.3)
	Belgium	44.8	(2.0)	59.8	(1.0)	74.6	(1.4)	82.5	(1.7)	52.0	(2.3)	63.7	(0.9)	75.5	(1.1)	81.9	(1.6)
	Canada	54.4	(2.1)	74.2	(0.8)	86.2	(0.8)	91.3	(1.0)	52.8	(1.8)	67.0	(0.7)	78.5	(1.0)	87.5	(1.1)
	Czech Republic	51.3	(2.4)	63.7	(1.1)	74.6	(2.0)	81.9	(2.3)	57.4	(2.3)	58.7	(1.3)	63.1	(2.5)	71.2	(2.4)
	Denmark	38.6	(1.8)	56.0	(1.3)	78.1	(1.9)	87.6	(3.0)	51.8	(2.3)	68.8	(1.3)	84.6	(1.3)	91.3	(1.7)
	Finland	41.6	(5.1)	47.0	(1.4)	60.2	(1.4)	73.1	(1.7)	52.9	(4.8)	62.2	(1.3)	69.4	(1.6)	80.5	(1.2)
	France	43.0	(1.8)	56.3	(1.2)	73.1	(1.8)	83.9	(2.9)	58.6	(2.1)	65.9	(1.4)	72.0	(2.0)	80.2	(1.8)
	Germany	49.9	(2.6)	65.2	(1.2)	78.2	(1.5)	84.4	(1.7)	43.4	(2.5)	57.2	(1.2)	69.6	(1.5)	79.2	(2.2)
	Greece	49.0	(2.1)	54.6	(1.1)	66.7	(2.4)	73.6	(4.4)	49.6	(1.9)	51.3	(1.1)	59.2	(2.6)	64.2	(4.6)
	Hungary	43.2	(2.8)	47.1	(1.2)	55.6	(2.3)	60.7	(3.8)	63.4	(2.5)	66.5	(1.1)	66.2	(1.9)	71.6	(3.0)
	Iceland	48.7	(2.1)	71.7	(1.0)	88.9	(1.3)	94.0	(1.7)	53.8	(2.4)	75.8	(0.9)	85.9	(1.2)	93.6	(1.8)
	Ireland	48.2	(2.3)	61.3	(1.1)	72.3	(1.8)	76.7	(2.3)	48.9	(2.0)	59.5	(1.1)	75.7	(1.6)	82.9	(2.6)
	Italy	50.7	(1.3)	65.3	(0.8)	74.0	(1.9)	76.9	(2.4)	55.4	(1.2)	63.1	(0.7)	69.9	(1.3)	74.5	(2.2)
	Japan	36.0	(2.3)	55.0	(1.2)	64.5	(1.2)	70.4	(1.6)	31.3	(2.0)	41.3	(1.1)	48.0	(1.4)	55.4	(2.2)
	Korea	37.2	(3.1)	50.2	(1.2)	60.1	(1.5)	66.8	(2.3)	34.1	(3.0)	41.6	(1.1)	54.5	(1.3)	67.0	(3.1)
	Luxembourg	50.0	(1.8)	65.1	(1.1)	76.7	(1.9)	86.1	(2.8)	47.6	(1.8)	54.3	(1.0)	67.8	(1.7)	79.9	(2.9)
	Mexico	63.1	(1.1)	69.2	(0.9)	78.8	(2.8)	c	c	59.0	(1.1)	65.1	(1.0)	69.5	(3.1)	c	c
	Netherlands	50.6	(2.8)	58.2	(1.3)	66.8	(1.7)	77.0	(2.1)	49.9	(3.1)	54.3	(1.4)	65.4	(1.8)	78.2	(1.9)
	New Zealand	40.7	(2.2)	60.4	(1.2)	78.7	(1.4)	91.5	(1.2)	45.6	(2.6)	57.5	(1.0)	71.4	(2.0)	85.0	(1.5)
	Norway	55.0	(2.3)	64.7	(1.1)	75.5	(2.1)	83.8	(2.6)	52.9	(2.1)	64.4	(1.0)	78.9	(2.2)	86.1	(3.0)
	Poland	54.6	(1.9)	69.5	(0.9)	82.3	(1.4)	89.8	(2.0)	68.3	(1.8)	81.7	(0.8)	89.2	(1.4)	95.7	(1.2)
	Portugal	62.3	(1.4)	70.9	(1.0)	81.8	(2.0)	90.2	(2.8)	64.2	(1.5)	72.1	(1.1)	83.0	(1.8)	89.9	(3.1)
	Slovak Republic	49.9	(2.3)	52.3	(1.3)	58.1	(2.4)	62.9	(2.9)	72.4	(1.7)	77.1	(0.9)	80.5	(1.8)	85.1	(2.6)
	Spain	43.9	(1.9)	57.8	(1.0)	72.4	(1.5)	83.1	(2.3)	51.0	(1.5)	61.8	(0.9)	70.6	(1.6)	80.0	(2.5)
	Sweden	46.5	(2.7)	65.0	(1.3)	80.1	(1.7)	85.8	(2.7)	41.9	(2.2)	63.2	(1.2)	77.4	(2.1)	85.0	(3.0)
	Switzerland	43.0	(2.1)	58.8	(1.1)	72.8	(1.7)	82.1	(1.9)	39.3	(1.9)	50.5	(1.0)	66.4	(1.5)	78.4	(1.6)
	Turkey	58.1	(1.6)	69.4	(1.2)	83.4	(2.9)	c	c	67.0	(1.2)	76.0	(1.1)	81.9	(2.8)	c	c
	United Kingdom	50.1	(2.0)	74.8	(0.9)	88.5	(1.0)	94.2	(0.9)	53.9	(1.9)	64.1	(0.9)	78.4	(1.3)	88.1	(1.3)
	United States	62.1	(2.3)	76.5	(0.8)	89.2	(1.1)	93.9	(1.0)	62.3	(2.3)	67.9	(1.1)	81.2	(1.5)	91.6	(1.3)
	OECD average	47.9	(0.4)	61.7	(0.2)	74.6	(0.3)	82.1	(0.4)	51.5	(0.4)	61.5	(0.2)	72.2	(0.3)	81.0	(0.4)
Partners	Argentina	59.9	(2.0)	70.1	(1.5)	77.5	(4.9)	c	c	66.4	(1.2)	68.7	(1.4)	70.0	(4.3)	c	c
	Azerbaijan	50.1	(1.4)	59.5	(2.0)	c	c	c	c	57.3	(1.1)	64.2	(1.7)	c	c	c	c
	Brazil	63.0	(1.1)	72.2	(1.5)	81.8	(3.7)	c	c	61.9	(1.1)	68.9	(1.4)	74.4	(4.6)	c	c
	Bulgaria	52.7	(1.4)	66.1	(1.3)	75.5	(2.5)	80.5	(4.0)	60.8	(1.4)	72.4	(1.2)	77.4	(2.3)	82.8	(4.0)
	Chile	58.2	(1.3)	70.0	(1.1)	80.3	(2.0)	c	c	65.5	(1.1)	72.3	(1.0)	81.9	(2.2)	c	c
	Colombia	66.7	(1.1)	74.5	(1.6)	c	c	c	c	66.9	(1.2)	71.8	(1.7)	c	c	c	c
	Croatia	54.3	(1.9)	64.0	(1.1)	73.3	(1.8)	81.7	(2.9)	53.6	(2.1)	56.1	(1.1)	63.4	(1.9)	74.1	(2.9)
	Estonia	38.1	(4.2)	51.7	(1.4)	65.8	(1.5)	76.0	(2.2)	57.8	(4.2)	70.2	(1.1)	72.8	(1.6)	81.7	(2.5)
	Hong Kong-China	48.4	(2.8)	65.0	(1.4)	76.7	(1.7)	79.1	(1.8)	53.6	(3.2)	61.3	(1.3)	67.0	(1.4)	75.8	(1.9)
	Indonesia	38.8	(1.3)	41.7	(1.2)	c	c	c	c	42.2	(1.0)	43.1	(1.6)	c	c	c	c
	Israel	57.3	(1.7)	63.9	(1.5)	70.8	(2.7)	73.2	(3.8)	62.0	(1.7)	67.0	(1.6)	72.2	(2.2)	76.6	(3.6)
	Jordan	59.8	(1.3)	61.3	(1.4)	70.6	(3.9)	c	c	75.0	(1.3)	76.9	(1.0)	82.2	(2.8)	c	c
	Kyrgyzstan	64.1	(1.1)	59.3	(1.9)	c	c	c	c	68.3	(1.0)	67.8	(2.1)	c	c	c	c
	Latvia	58.6	(2.8)	59.7	(1.1)	69.7	(2.4)	79.9	(3.9)	64.1	(2.4)	65.5	(1.3)	71.1	(2.1)	77.8	(3.8)
	Liechtenstein	41.3	(7.5)	59.8	(4.1)	73.3	(5.3)	83.4	(6.3)	31.9	(9.5)	50.3	(4.2)	54.5	(6.2)	65.0	(8.7)
	Lithuania	50.8	(2.0)	61.3	(1.5)	72.0	(2.1)	77.3	(4.0)	61.6	(2.0)	67.0	(1.1)	73.5	(1.7)	82.8	(2.9)
	Macao-China	50.8	(2.9)	55.4	(0.9)	65.6	(1.7)	71.8	(3.6)	55.5	(2.5)	56.8	(1.0)	64.0	(2.0)	72.5	(4.1)
	Montenegro	49.1	(1.3)	63.5	(1.4)	84.0	(4.5)	c	c	62.7	(1.2)	72.2	(1.2)	85.1	(4.3)	c	c
	Qatar	59.4	(0.7)	70.0	(1.8)	c	c	c	c	58.5	(0.7)	68.3	(1.4)	c	c	c	c
	Romania	48.0	(1.8)	54.5	(1.3)	63.9	(4.6)	c	c	61.0	(2.0)	68.9	(1.5)	75.6	(4.6)	c	c
	Russian Federation	44.9	(2.5)	50.9	(1.2)	56.2	(2.2)	61.1	(3.7)	67.1	(2.1)	75.2	(1.0)	79.5	(2.2)	85.4	(3.1)
	Serbia	54.1	(1.4)	67.1	(1.1)	77.6	(2.8)	c	c	62.2	(1.2)	68.8	(0.9)	79.9	(3.3)	c	c
	Slovenia	42.7	(2.5)	47.5	(1.2)	57.5	(1.8)	63.7	(3.1)	54.2	(2.5)	57.6	(1.1)	64.4	(2.0)	70.1	(2.6)
	Chinese Taipei	49.3	(2.6)	64.8	(1.0)	74.1	(1.1)	80.6	(1.3)	57.7	(2.6)	72.0	(1.0)	80.6	(1.0)	86.2	(0.9)
	Thailand	70.3	(1.1)	74.8	(1.2)	82.3	(2.9)	c	c	69.7	(1.2)	74.2	(1.2)	83.7	(3.3)	c	c
	Tunisia	54.9	(1.0)	65.9	(1.5)	c	c	c	c	73.6	(1.1)	79.1	(1.5)	c	c	c	c
	Uruguay	60.3	(1.7)	69.3	(1.2)	81.5	(2.6)	c	c	68.0	(1.2)	74.4	(1.1)	81.1	(2.7)	c	c

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[Part 4/4]

Table A3.8b Self-efficacy in science (underlying percentages), by performance group

		Percentage of students who believe they can perform the following tasks either easily or with a bit of effort															
		Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars								Identify the better of two explanations for the formation of acid rain							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	37.9	(1.4)	46.8	(0.8)	63.7	(1.1)	79.2	(1.2)	34.4	(1.4)	44.5	(0.9)	65.0	(1.2)	80.7	(1.4)
	Austria	31.3	(2.2)	31.5	(1.0)	40.0	(1.6)	56.5	(2.5)	36.8	(2.7)	51.3	(1.1)	74.2	(1.4)	86.6	(1.7)
	Belgium	40.7	(1.7)	44.8	(1.0)	60.5	(1.5)	76.7	(1.8)	39.5	(1.7)	49.0	(1.0)	70.6	(1.5)	82.9	(1.8)
	Canada	41.0	(1.9)	49.3	(0.8)	64.5	(1.1)	78.3	(1.2)	41.4	(1.8)	53.5	(1.0)	71.3	(1.1)	85.6	(1.4)
	Czech Republic	42.8	(2.4)	53.6	(1.2)	63.8	(1.8)	74.2	(2.2)	46.3	(2.3)	53.2	(1.2)	63.7	(1.7)	76.1	(2.2)
	Denmark	47.3	(2.0)	59.5	(1.3)	76.1	(2.3)	85.9	(2.7)	33.4	(2.3)	44.7	(1.4)	66.5	(2.0)	79.8	(2.9)
	Finland	36.3	(4.3)	53.5	(1.3)	70.8	(1.3)	82.5	(1.3)	30.5	(3.5)	34.4	(1.2)	53.4	(1.5)	72.5	(1.9)
	France	37.3	(1.7)	50.7	(1.2)	68.2	(2.1)	80.3	(3.1)	30.5	(1.5)	37.7	(1.3)	55.0	(2.2)	73.3	(2.5)
	Germany	32.2	(1.8)	39.3	(1.0)	49.0	(1.7)	63.1	(2.1)	37.9	(2.4)	57.7	(1.3)	76.8	(1.6)	89.5	(1.4)
	Greece	37.0	(1.7)	39.7	(1.3)	53.1	(2.6)	65.3	(4.1)	44.2	(2.2)	58.5	(1.2)	76.7	(1.9)	86.2	(3.6)
	Hungary	32.8	(2.8)	31.5	(1.1)	40.7	(1.9)	55.9	(3.3)	46.6	(2.8)	59.1	(1.2)	75.8	(1.8)	82.4	(3.1)
	Iceland	42.3	(2.0)	56.2	(1.0)	76.0	(1.7)	87.0	(3.0)	39.0	(2.1)	51.4	(1.2)	73.3	(2.1)	85.3	(3.6)
	Ireland	33.1	(2.1)	34.6	(1.1)	51.1	(2.0)	67.0	(2.9)	42.8	(2.3)	59.9	(1.1)	79.9	(1.6)	89.2	(2.0)
	Italy	40.0	(1.3)	44.2	(0.9)	53.8	(1.7)	64.4	(2.9)	44.7	(1.3)	55.7	(0.9)	69.7	(1.4)	80.9	(1.8)
	Japan	18.8	(1.7)	22.5	(1.0)	29.1	(1.3)	39.9	(1.7)	28.8	(2.4)	39.5	(1.1)	47.7	(1.7)	56.5	(2.1)
	Korea	27.8	(2.3)	35.5	(1.2)	45.4	(1.9)	56.4	(3.2)	37.7	(2.1)	52.8	(1.5)	64.7	(1.5)	75.2	(2.6)
	Luxembourg	44.1	(1.8)	41.2	(1.1)	48.8	(2.0)	59.2	(3.0)	41.3	(1.7)	44.3	(1.0)	62.0	(2.1)	78.4	(2.6)
	Mexico	48.0	(1.1)	60.8	(0.9)	83.0	(2.6)	c	c	57.0	(1.1)	65.5	(0.9)	80.2	(3.3)	c	c
	Netherlands	44.0	(2.9)	46.4	(1.3)	58.2	(1.8)	74.8	(2.2)	50.8	(3.0)	57.4	(1.2)	74.7	(1.3)	83.5	(1.7)
	New Zealand	34.1	(2.0)	39.8	(1.5)	58.5	(2.2)	73.7	(1.7)	29.7	(2.3)	36.2	(1.4)	58.0	(2.1)	77.6	(1.9)
	Norway	50.2	(2.1)	58.5	(1.2)	72.0	(2.1)	83.8	(3.2)	59.8	(1.7)	75.7	(1.0)	90.3	(1.7)	96.3	(1.4)
	Poland	43.9	(1.8)	55.5	(1.1)	74.8	(1.7)	86.8	(2.1)	53.1	(1.7)	69.2	(1.0)	83.6	(1.3)	91.7	(2.0)
	Portugal	49.8	(1.8)	54.8	(1.2)	71.1	(2.1)	81.8	(3.4)	54.2	(1.7)	66.1	(1.2)	80.9	(2.0)	88.2	(4.4)
	Slovak Republic	46.0	(2.4)	58.7	(1.3)	70.7	(1.7)	80.9	(2.6)	53.8	(2.0)	66.1	(1.3)	79.8	(1.8)	84.9	(3.0)
	Spain	40.1	(2.1)	55.0	(0.9)	69.0	(1.6)	81.0	(2.2)	40.8	(1.9)	59.9	(1.0)	79.2	(1.3)	89.4	(2.1)
	Sweden	39.9	(2.5)	49.5	(1.4)	66.2	(2.2)	82.8	(2.7)	42.7	(2.7)	52.8	(1.3)	72.2	(2.2)	87.0	(2.5)
	Switzerland	34.1	(1.9)	36.6	(0.9)	47.3	(1.4)	59.7	(2.0)	35.0	(2.0)	36.3	(0.8)	57.8	(1.8)	73.0	(2.3)
	Turkey	43.9	(1.4)	54.5	(1.4)	77.2	(4.1)	c	c	46.7	(1.3)	61.9	(1.3)	86.7	(2.6)	c	c
	United Kingdom	36.8	(1.9)	44.9	(1.2)	62.6	(1.6)	77.5	(1.7)	39.5	(2.0)	53.8	(1.2)	76.0	(1.5)	89.6	(1.4)
	United States	49.3	(2.1)	53.3	(1.3)	71.8	(2.5)	83.7	(2.2)	49.3	(2.4)	53.0	(1.3)	70.1	(1.7)	83.9	(2.0)
	OECD average	39.0	(0.4)	46.0	(0.2)	59.9	(0.3)	72.8	(0.5)	41.6	(0.4)	52.6	(0.2)	70.3	(0.3)	82.4	(0.4)
Partners	Argentina	45.5	(1.6)	59.1	(1.6)	71.1	(5.2)	c	c	51.4	(1.5)	64.0	(1.8)	77.8	(5.0)	c	c
	Azerbaijan	35.7	(1.2)	39.7	(2.1)	c	c	c	c	37.3	(1.4)	44.2	(2.0)	c	c	c	c
	Brazil	39.3	(1.1)	45.7	(1.4)	60.2	(4.1)	c	c	44.0	(1.1)	56.0	(1.5)	78.1	(4.0)	c	c
	Bulgaria	37.6	(1.6)	47.8	(1.5)	63.6	(2.8)	76.1	(4.6)	38.6	(1.5)	44.8	(1.4)	57.5	(3.6)	73.9	(7.0)
	Chile	48.2	(1.4)	55.9	(1.2)	64.2	(2.8)	c	c	54.4	(1.5)	68.8	(1.3)	84.2	(2.0)	c	c
	Colombia	45.8	(1.3)	52.3	(2.2)	c	c	c	c	54.5	(1.4)	65.5	(1.8)	c	c	c	c
	Croatia	39.9	(1.9)	49.0	(1.0)	67.6	(1.9)	76.2	(3.0)	53.0	(1.8)	68.8	(0.9)	85.9	(1.6)	94.6	(1.8)
	Estonia	29.8	(4.3)	38.8	(1.2)	50.6	(1.8)	68.1	(2.6)	32.0	(3.8)	45.1	(1.2)	66.3	(1.5)	83.0	(2.1)
	Hong Kong-China	37.8	(3.1)	38.8	(1.4)	47.3	(1.6)	55.9	(1.9)	51.1	(3.1)	69.7	(1.1)	83.3	(1.1)	89.3	(1.1)
	Indonesia	26.2	(1.0)	25.6	(1.4)	c	c	c	c	27.9	(1.0)	27.2	(1.8)	c	c	c	c
	Israel	52.3	(1.8)	52.8	(1.8)	60.7	(2.3)	64.9	(4.8)	48.1	(1.9)	46.3	(1.5)	56.0	(2.4)	66.5	(3.2)
	Jordan	48.8	(1.4)	50.2	(1.3)	62.2	(3.4)	c	c	53.2	(1.2)	68.3	(1.2)	86.5	(2.3)	c	c
	Kyrgyzstan	45.6	(1.0)	47.6	(2.1)	c	c	c	c	48.1	(1.0)	47.8	(1.9)	c	c	c	c
	Latvia	38.3	(2.1)	46.7	(1.1)	63.2	(1.9)	74.1	(3.8)	43.8	(2.6)	49.0	(1.2)	64.6	(2.6)	77.3	(3.5)
	Liechtenstein	24.6	(7.8)	35.9	(4.0)	35.3	(6.4)	56.9	(9.0)	28.3	(9.5)	49.7	(4.3)	63.7	(6.5)	78.8	(7.7)
	Lithuania	43.6	(2.5)	49.4	(1.5)	61.4	(1.9)	72.5	(3.5)	43.2	(1.8)	50.7	(1.4)	64.1	(2.0)	74.1	(3.4)
	Macao-China	31.7	(2.5)	34.1	(1.0)	42.7	(2.1)	54.6	(3.9)	41.5	(2.8)	59.1	(1.2)	77.5	(1.7)	86.2	(2.9)
	Montenegro	39.5	(1.2)	53.6	(1.1)	68.1	(4.6)	c	c	51.7	(1.3)	68.9	(1.3)	84.5	(4.2)	c	c
	Qatar	50.6	(0.8)	55.9	(1.7)	c	c	c	c	50.8	(0.8)	60.5	(1.6)	c	c	c	c
	Romania	35.3	(1.4)	36.5	(1.4)	59.8	(5.4)	c	c	44.8	(1.5)	54.2	(1.4)	71.4	(3.6)	c	c
	Russian Federation	34.6	(2.8)	44.5	(1.3)	58.0	(2.5)	67.1	(4.3)	37.7	(3.1)	47.6	(1.5)	61.9	(2.5)	73.5	(4.4)
	Serbia	41.6	(1.5)	54.8	(1.3)	74.2	(2.8)	c	c	46.6	(1.3)	63.8	(1.1)	83.2	(2.3)	c	c
	Slovenia	36.1	(2.5)	43.4	(1.2)	55.6	(2.0)	68.8	(2.5)	41.4	(1.9)	56.4	(1.3)	75.4	(1.6)	85.0	(2.1)
	Chinese Taipei	40.4	(2.1)	46.8	(1.1)	56.6	(1.2)	66.6	(1.9)	47.4	(2.3)	61.8	(1.0)	74.7	(1.0)	83.9	(1.3)
	Thailand	55.7	(1.5)	54.6	(1.4)	57.4	(3.9)	c	c	60.8	(1.4)	62.7	(1.3)	81.3	(2.8)	c	c
	Tunisia	35.8	(1.3)	42.7	(1.8)	c	c	c	c	41.7	(0.9)	38.5	(1.5)	c	c	c	c
	Uruguay	49.7	(1.5)	61.8	(1.4)	76.7	(3.0)	c	c	58.5	(1.7)	69.9	(1.3)	82.5	(2.7)	c	c

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Table A3.9a Self-concept in science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.60	(0.04)	-0.29	(0.02)	0.21	(0.02)	0.71	(0.03)	**-0.50**	(0.04)
	Austria	-0.21	(0.06)	-0.09	(0.03)	0.33	(0.04)	0.76	(0.06)	**-0.43**	(0.08)
	Belgium	-0.45	(0.06)	-0.29	(0.02)	0.02	(0.03)	0.45	(0.04)	**-0.43**	(0.05)
	Canada	-0.29	(0.04)	-0.03	(0.02)	0.51	(0.03)	1.03	(0.03)	**-0.53**	(0.04)
	Czech Republic	-0.14	(0.06)	-0.07	(0.02)	0.01	(0.03)	0.15	(0.04)	**-0.14**	(0.05)
	Denmark	-0.46	(0.04)	-0.22	(0.03)	0.35	(0.04)	0.75	(0.06)	**-0.40**	(0.08)
	Finland	-0.53	(0.08)	-0.21	(0.02)	0.16	(0.02)	0.58	(0.03)	**-0.42**	(0.04)
	France	-0.37	(0.05)	-0.25	(0.03)	0.14	(0.03)	0.71	(0.05)	**-0.57**	(0.06)
	Germany	-0.07	(0.05)	0.13	(0.03)	0.40	(0.03)	0.80	(0.05)	**-0.39**	(0.06)
	Greece	-0.09	(0.04)	-0.03	(0.02)	0.35	(0.04)	0.74	(0.12)	**-0.39**	(0.14)
	Hungary	-0.16	(0.07)	-0.33	(0.02)	-0.12	(0.04)	0.30	(0.07)	**-0.42**	(0.08)
	Iceland	-0.54	(0.04)	-0.02	(0.03)	0.69	(0.04)	1.21	(0.06)	**-0.52**	(0.08)
	Ireland	-0.59	(0.05)	-0.34	(0.03)	0.27	(0.04)	0.74	(0.06)	**-0.47**	(0.07)
	Italy	0.09	(0.02)	0.10	(0.02)	0.36	(0.03)	0.71	(0.06)	**-0.35**	(0.07)
	Japan	-1.23	(0.05)	-1.01	(0.02)	-0.74	(0.03)	-0.43	(0.05)	**-0.31**	(0.06)
	Korea	-1.10	(0.04)	-0.91	(0.02)	-0.43	(0.04)	0.02	(0.05)	**-0.44**	(0.05)
	Luxembourg	-0.07	(0.04)	0.17	(0.02)	0.55	(0.04)	1.00	(0.06)	**-0.44**	(0.08)
	Mexico	0.50	(0.02)	0.54	(0.02)	0.79	(0.04)	c	c	c	c
	Netherlands	-0.49	(0.08)	-0.51	(0.02)	-0.24	(0.03)	0.24	(0.04)	**-0.48**	(0.05)
	New Zealand	-0.39	(0.05)	-0.33	(0.03)	0.08	(0.04)	0.60	(0.04)	**-0.52**	(0.06)
	Norway	-0.33	(0.04)	-0.05	(0.02)	0.48	(0.05)	0.99	(0.06)	**-0.50**	(0.10)
	Poland	-0.04	(0.04)	-0.02	(0.02)	0.28	(0.03)	0.64	(0.05)	**-0.35**	(0.06)
	Portugal	0.11	(0.04)	0.28	(0.02)	0.61	(0.04)	0.94	(0.08)	**-0.33**	(0.09)
	Slovak Republic	0.00	(0.04)	0.12	(0.02)	0.32	(0.03)	0.46	(0.07)	-0.14	(0.08)
	Spain	-0.30	(0.03)	-0.12	(0.01)	0.41	(0.03)	0.90	(0.05)	**-0.49**	(0.07)
	Sweden	-0.53	(0.06)	-0.15	(0.02)	0.44	(0.04)	0.98	(0.05)	**-0.55**	(0.06)
	Switzerland	-0.27	(0.04)	-0.03	(0.02)	0.33	(0.03)	0.67	(0.05)	**-0.34**	(0.05)
	Turkey	0.07	(0.04)	0.16	(0.03)	0.58	(0.06)	c	c	c	c
	United Kingdom	-0.27	(0.03)	-0.16	(0.02)	0.18	(0.03)	0.69	(0.04)	**-0.51**	(0.05)
	United States	-0.02	(0.06)	0.04	(0.03)	0.55	(0.04)	0.95	(0.06)	**-0.40**	(0.08)
	OECD average	-0.33	(0.01)	-0.17	(0.00)	0.23	(0.01)	0.65	(0.01)	**-0.42**	(0.01)
Partners	Argentina	0.25	(0.03)	0.27	(0.03)	0.38	(0.14)	c	c	c	c
	Azerbaijan	0.64	(0.04)	0.67	(0.04)	c	c	c	c	c	c
	Bulgaria	0.34	(0.03)	0.35	(0.02)	0.45	(0.04)	0.75	(0.10)	**-0.30**	(0.10)
	Brazil	0.36	(0.02)	0.35	(0.03)	0.54	(0.08)	c	c	c	c
	Chile	0.04	(0.03)	0.19	(0.02)	0.58	(0.06)	c	c	c	c
	Colombia	0.72	(0.03)	0.77	(0.03)	c	c	c	c	c	c
	Estonia	-0.16	(0.06)	-0.02	(0.02)	0.25	(0.03)	0.61	(0.05)	**-0.36**	(0.06)
	Hong Kong-China	-0.55	(0.08)	-0.44	(0.03)	-0.21	(0.04)	0.18	(0.04)	**-0.39**	(0.05)
	Croatia	-0.14	(0.05)	-0.07	(0.02)	0.11	(0.04)	0.36	(0.05)	**-0.25**	(0.06)
	Indonesia	0.29	(0.02)	-0.03	(0.04)	c	c	c	c	c	c
	Israel	0.00	(0.04)	0.25	(0.04)	0.69	(0.05)	0.99	(0.06)	**-0.31**	(0.08)
	Jordan	0.60	(0.02)	0.80	(0.02)	1.22	(0.05)	c	c	c	c
	Kyrgyzstan	0.75	(0.02)	0.36	(0.03)	c	c	c	c	c	c
	Liechtenstein	-0.22	(0.18)	-0.02	(0.10)	0.25	(0.11)	0.49	(0.17)	-0.24	(0.20)
	Lithuania	-0.33	(0.03)	-0.33	(0.02)	-0.01	(0.04)	0.36	(0.07)	**-0.38**	(0.08)
	Latvia	0.00	(0.05)	-0.02	(0.02)	0.14	(0.04)	0.43	(0.08)	**-0.29**	(0.10)
	Macao-China	-0.18	(0.05)	-0.20	(0.03)	0.05	(0.05)	0.34	(0.09)	**-0.29**	(0.10)
	Montenegro	0.50	(0.02)	0.47	(0.02)	0.68	(0.13)	c	c	c	c
	Qatar	0.54	(0.02)	0.74	(0.03)	c	c	c	c	c	c
	Romania	0.36	(0.03)	0.30	(0.02)	0.50	(0.07)	c	c	c	c
	Russian Federation	0.11	(0.04)	0.12	(0.03)	0.28	(0.04)	0.59	(0.07)	**-0.31**	(0.08)
	Serbia	0.20	(0.03)	0.22	(0.02)	0.56	(0.05)	c	c	c	c
	Slovenia	0.23	(0.04)	0.14	(0.02)	0.24	(0.03)	0.47	(0.06)	**-0.23**	(0.07)
	Chinese Taipei	-0.39	(0.06)	-0.58	(0.03)	-0.32	(0.02)	-0.02	(0.03)	**-0.29**	(0.04)
	Thailand	0.74	(0.02)	0.63	(0.02)	0.77	(0.06)	c	c	c	c
	Tunisia	0.59	(0.02)	0.71	(0.03)	c	c	c	c	c	c
	Uruguay	0.28	(0.04)	0.35	(0.03)	0.64	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/3]

Table A3.9b Self-concept in science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Learning advanced science topics would be easy for me								I can usually give good answers to test questions on science topics							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	29.5	(1.6)	27.2	(0.8)	46.3	(1.5)	69.3	(1.5)	39.6	(2.1)	57.6	(0.9)	79.8	(1.0)	92.1	(0.9)
	Austria	50.5	(3.1)	40.5	(1.3)	49.9	(1.8)	67.0	(2.9)	56.4	(2.0)	63.5	(1.3)	78.8	(1.4)	87.4	(1.5)
	Belgium	42.5	(2.1)	32.6	(1.1)	42.7	(1.5)	64.1	(1.9)	45.9	(2.4)	56.9	(1.1)	73.9	(1.2)	87.8	(1.3)
	Canada	42.7	(2.2)	43.7	(1.1)	62.4	(1.6)	80.8	(1.3)	50.1	(2.3)	65.2	(1.1)	83.3	(1.1)	94.0	(0.9)
	Czech Republic	47.2	(3.1)	34.2	(1.6)	31.5	(1.8)	40.2	(2.6)	53.7	(2.6)	62.9	(1.2)	73.4	(1.7)	79.1	(2.2)
	Denmark	26.7	(2.0)	29.5	(1.3)	52.4	(2.0)	68.9	(3.3)	46.0	(2.2)	60.7	(1.2)	83.8	(1.5)	93.8	(2.4)
	Finland	34.7	(4.4)	38.9	(1.3)	53.5	(1.7)	69.1	(2.1)	43.7	(5.1)	55.9	(1.3)	76.4	(1.3)	89.7	(1.4)
	France	38.6	(2.1)	36.3	(1.3)	51.2	(1.8)	70.3	(2.9)	49.4	(2.2)	56.1	(1.2)	71.5	(1.6)	88.8	(1.8)
	Germany	62.4	(2.5)	62.7	(1.2)	69.9	(1.4)	80.0	(2.0)	52.3	(2.7)	61.2	(1.2)	73.3	(1.5)	85.0	(1.7)
	Greece	55.8	(2.4)	52.3	(1.4)	66.8	(2.6)	75.9	(5.2)	53.9	(2.0)	61.0	(1.2)	78.5	(2.0)	89.4	(4.7)
	Hungary	48.5	(4.0)	26.8	(1.2)	30.0	(1.8)	49.4	(3.4)	52.6	(3.2)	51.5	(1.2)	61.0	(2.2)	73.6	(3.0)
	Iceland	30.9	(2.1)	43.3	(1.3)	71.5	(2.3)	87.9	(2.7)	40.6	(1.9)	64.7	(1.2)	90.3	(1.4)	97.6	(1.1)
	Ireland	34.4	(2.4)	28.1	(1.1)	47.1	(2.7)	66.4	(3.1)	41.2	(2.4)	54.4	(1.4)	80.3	(2.1)	91.0	(1.7)
	Italy	56.4	(1.3)	50.5	(0.9)	59.2	(1.7)	70.0	(2.6)	72.6	(1.1)	78.6	(0.7)	87.9	(1.3)	94.2	(1.5)
	Japan	11.9	(1.4)	8.8	(0.6)	10.8	(1.1)	17.9	(1.7)	18.7	(2.0)	25.3	(1.0)	32.3	(1.7)	43.7	(2.6)
	Korea	9.8	(1.6)	9.0	(0.8)	19.6	(1.8)	35.2	(3.0)	15.6	(1.7)	25.1	(1.2)	48.1	(2.4)	67.0	(2.5)
	Luxembourg	56.7	(1.7)	63.7	(0.9)	73.7	(1.7)	84.9	(2.6)	55.5	(1.7)	69.4	(1.1)	81.2	(1.6)	90.8	(2.9)
	Mexico	84.8	(0.8)	80.5	(0.8)	81.1	(2.2)	c	c	75.1	(0.8)	80.7	(0.8)	90.4	(1.9)	c	c
	Netherlands	34.3	(3.2)	25.1	(1.1)	27.4	(2.1)	46.3	(2.4)	40.3	(3.3)	38.9	(1.2)	55.4	(1.6)	76.7	(2.1)
	New Zealand	38.5	(2.7)	27.2	(1.5)	41.6	(1.9)	66.5	(2.0)	48.5	(2.6)	59.1	(1.3)	77.3	(1.5)	90.9	(1.3)
	Norway	40.8	(2.2)	36.8	(1.2)	53.6	(2.2)	76.8	(3.6)	54.8	(2.1)	73.8	(1.1)	92.2	(1.1)	97.9	(0.9)
	Poland	63.9	(2.1)	57.2	(1.1)	58.3	(2.1)	72.0	(3.1)	59.3	(2.3)	66.2	(1.1)	81.7	(1.6)	90.5	(1.9)
	Portugal	51.7	(1.9)	49.4	(1.4)	67.9	(2.3)	82.0	(3.8)	71.5	(1.9)	83.0	(1.0)	94.7	(1.2)	97.4	(1.8)
	Slovak Republic	51.2	(3.0)	49.3	(1.1)	57.5	(2.2)	67.1	(3.4)	52.2	(2.7)	65.3	(1.1)	74.8	(1.9)	74.7	(2.4)
	Spain	51.9	(1.9)	52.2	(0.9)	65.8	(1.7)	77.1	(2.4)	47.1	(1.7)	58.0	(0.9)	80.3	(1.5)	90.5	(1.7)
	Sweden	30.7	(1.9)	35.5	(1.1)	58.9	(2.3)	80.8	(2.3)	46.2	(2.6)	67.7	(1.1)	87.5	(1.6)	94.1	(1.5)
	Switzerland	48.6	(2.0)	49.5	(1.0)	60.6	(1.5)	74.4	(1.7)	47.8	(2.0)	61.4	(1.0)	77.6	(1.1)	87.4	(1.5)
	Turkey	66.3	(1.6)	65.5	(1.3)	78.8	(2.5)	c	c	57.4	(1.7)	60.4	(1.5)	81.2	(3.3)	c	c
	United Kingdom	44.7	(1.9)	35.6	(1.2)	47.0	(1.8)	70.2	(2.0)	55.9	(1.7)	65.4	(1.0)	81.6	(1.3)	92.6	(1.4)
	United States	47.9	(2.0)	52.0	(1.3)	72.9	(2.0)	84.8	(2.1)	57.6	(2.1)	60.3	(1.4)	78.1	(1.9)	88.7	(1.9)
	OECD average	42.3	(0.5)	39.2	(0.2)	51.8	(0.4)	67.7	(0.5)	48.9	(0.5)	59.6	(0.2)	76.3	(0.3)	86.7	(0.4)
Partners	Argentina	68.5	(1.8)	63.3	(1.7)	60.8	(5.7)	c	c	68.5	(1.5)	75.6	(1.3)	85.4	(3.9)	c	c
	Azerbaijan	84.7	(1.0)	81.1	(1.5)	c	c	c	c	74.3	(1.7)	78.8	(1.6)	c	c	c	c
	Brazil	73.3	(1.1)	61.9	(1.6)	61.3	(5.4)	c	c	78.3	(1.0)	83.3	(1.2)	88.0	(3.6)	c	c
	Bulgaria	67.2	(1.6)	65.6	(1.3)	69.7	(2.4)	79.4	(5.0)	74.1	(1.6)	82.1	(1.2)	88.7	(1.6)	93.2	(3.0)
	Chile	59.3	(1.8)	61.3	(1.3)	68.0	(2.8)	c	c	53.7	(1.6)	60.1	(1.4)	77.6	(2.9)	c	c
	Colombia	86.4	(1.0)	85.9	(1.4)	c	c	c	c	81.6	(1.1)	84.8	(1.2)	c	c	c	c
	Croatia	54.0	(2.4)	48.6	(1.2)	48.8	(2.0)	60.1	(4.5)	53.9	(2.3)	64.9	(1.0)	76.2	(1.9)	84.3	(2.7)
	Estonia	39.4	(3.9)	32.4	(1.3)	43.8	(2.0)	60.6	(2.4)	44.8	(4.2)	57.3	(1.2)	73.7	(1.8)	84.8	(1.8)
	Hong Kong-China	38.3	(4.6)	29.9	(1.7)	33.2	(1.9)	47.3	(2.1)	30.4	(3.7)	30.5	(1.9)	40.1	(2.0)	54.1	(2.5)
	Indonesia	72.5	(1.1)	53.5	(2.5)	c	c	c	c	73.3	(1.0)	60.8	(2.5)	c	c	c	c
	Israel	56.3	(1.5)	57.0	(1.8)	72.1	(3.1)	81.0	(3.2)	61.5	(1.6)	73.5	(1.3)	86.9	(2.0)	94.0	(2.0)
	Jordan	86.1	(0.8)	87.1	(0.8)	91.2	(2.0)	c	c	82.9	(1.0)	88.9	(0.8)	95.8	(1.2)	c	c
	Kyrgyzstan	89.4	(0.6)	63.7	(2.4)	c	c	c	c	84.6	(0.8)	77.8	(2.3)	c	c	c	c
	Latvia	60.0	(3.0)	50.5	(1.3)	54.3	(3.2)	68.5	(4.5)	55.6	(2.8)	66.9	(1.5)	80.5	(2.3)	85.9	(3.6)
	Liechtenstein	59.2	(9.2)	52.4	(4.3)	56.7	(6.0)	61.2	(8.2)	60.9	(9.0)	60.1	(4.3)	75.5	(4.9)	72.9	(6.8)
	Lithuania	34.9	(1.8)	26.8	(1.0)	38.9	(1.9)	53.7	(3.4)	40.7	(1.8)	49.0	(1.3)	70.9	(2.2)	80.0	(3.3)
	Macao-China	48.0	(2.8)	39.9	(1.5)	46.6	(2.7)	61.2	(4.7)	51.8	(2.9)	56.5	(1.5)	67.7	(2.2)	79.2	(3.7)
	Montenegro	82.1	(1.1)	76.6	(1.1)	77.9	(4.8)	c	c	75.8	(1.1)	79.9	(1.1)	92.2	(3.3)	c	c
	Qatar	81.0	(0.6)	76.3	(1.3)	c	c	c	c	78.5	(0.6)	87.3	(1.0)	c	c	c	c
	Romania	76.5	(1.8)	69.4	(1.6)	75.5	(3.8)	c	c	78.4	(1.5)	79.6	(1.3)	90.5	(2.4)	c	c
	Russian Federation	55.7	(1.9)	44.6	(1.2)	46.2	(2.8)	57.1	(4.6)	61.2	(1.8)	67.3	(1.3)	75.7	(1.8)	86.4	(2.6)
	Serbia	67.2	(1.5)	61.8	(1.4)	71.7	(3.2)	c	c	66.3	(1.3)	68.8	(1.1)	78.7	(2.9)	c	c
	Slovenia	74.4	(2.0)	70.4	(1.0)	72.4	(1.8)	77.5	(2.6)	74.2	(2.0)	72.4	(1.1)	76.3	(2.1)	82.1	(2.6)
	Chinese Taipei	35.9	(3.2)	21.3	(1.1)	26.8	(1.1)	37.2	(1.7)	39.1	(2.6)	28.1	(1.4)	39.0	(1.4)	51.0	(1.7)
	Thailand	91.6	(0.7)	87.9	(0.8)	90.9	(2.3)	c	c	82.9	(0.9)	79.2	(1.0)	83.7	(3.5)	c	c
	Tunisia	82.4	(1.0)	84.3	(1.2)	c	c	c	c	70.1	(1.1)	69.7	(1.5)	c	c	c	c
	Uruguay	71.2	(2.0)	67.9	(1.7)	71.4	(3.7)	c	c	72.2	(1.4)	79.4	(1.1)	88.4	(2.1)	c	c

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[Part 2/3]

Table A3.9b Self-concept in science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I learn science topics quickly								Science topics are easy for me							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	32.3	(1.7)	45.0	(0.9)	66.9	(1.1)	83.2	(1.2)	27.4	(1.6)	36.3	(0.9)	57.9	(1.1)	76.0	(1.3)
	Austria	47.3	(2.4)	55.9	(1.2)	70.9	(1.7)	83.1	(2.2)	40.0	(2.6)	41.3	(1.3)	51.8	(2.0)	63.4	(3.4)
	Belgium	41.7	(2.3)	47.6	(1.1)	61.1	(1.5)	76.0	(2.2)	34.6	(2.2)	33.7	(1.2)	39.7	(1.6)	57.2	(2.2)
	Canada	43.7	(2.3)	55.5	(1.0)	75.9	(1.3)	89.3	(1.1)	40.9	(2.1)	49.8	(1.1)	70.7	(1.3)	85.5	(1.5)
	Czech Republic	45.5	(3.3)	55.1	(1.0)	59.6	(2.2)	66.4	(2.6)	43.8	(3.4)	44.2	(1.2)	41.9	(2.2)	45.9	(2.0)
	Denmark	39.1	(2.2)	51.0	(1.4)	74.3	(2.0)	85.3	(2.8)	26.3	(2.0)	37.3	(1.3)	61.8	(1.9)	75.1	(3.0)
	Finland	39.2	(4.7)	47.6	(1.3)	67.8	(1.4)	82.7	(1.5)	27.2	(4.2)	39.0	(1.3)	58.2	(1.6)	75.7	(1.8)
	France	38.6	(1.8)	45.9	(1.3)	62.6	(1.8)	85.9	(1.9)	31.3	(2.1)	32.8	(1.1)	49.0	(1.7)	75.4	(2.6)
	Germany	47.8	(2.7)	59.6	(1.2)	71.1	(1.7)	83.5	(1.4)	43.0	(2.6)	47.3	(1.3)	54.0	(1.8)	67.7	(2.7)
	Greece	48.6	(1.9)	53.6	(1.1)	70.7	(1.8)	83.6	(3.2)	40.3	(2.1)	38.5	(1.4)	53.5	(2.3)	70.7	(5.7)
	Hungary	44.3	(2.5)	43.2	(1.1)	54.4	(2.0)	71.5	(2.8)	41.4	(3.6)	33.1	(1.2)	38.5	(1.9)	56.5	(3.7)
	Iceland	35.6	(2.4)	54.6	(1.3)	81.6	(1.9)	92.8	(1.7)	34.4	(2.0)	56.5	(1.2)	83.7	(1.8)	94.3	(1.8)
	Ireland	27.2	(2.2)	40.9	(1.3)	64.9	(1.7)	81.8	(2.8)	23.3	(2.3)	32.7	(1.1)	58.9	(1.8)	76.4	(3.3)
	Italy	53.6	(1.2)	56.9	(0.9)	69.1	(1.7)	80.9	(1.8)	49.9	(1.4)	46.9	(0.9)	57.8	(2.1)	68.4	(3.0)
	Japan	15.3	(1.6)	19.9	(1.0)	27.9	(1.6)	40.3	(2.2)	9.8	(1.5)	10.7	(0.7)	14.4	(1.2)	22.6	(2.1)
	Korea	15.4	(1.9)	23.2	(1.0)	42.9	(1.9)	61.7	(2.5)	9.9	(1.5)	13.7	(1.0)	29.0	(1.5)	44.2	(2.6)
	Luxembourg	50.9	(1.9)	59.6	(1.0)	72.9	(2.0)	85.3	(3.3)	47.2	(1.7)	52.9	(1.3)	64.1	(2.2)	78.2	(3.1)
	Mexico	71.7	(1.0)	78.3	(0.9)	86.1	(2.3)	c	c	70.1	(1.0)	74.1	(0.8)	84.0	(2.3)	c	c
	Netherlands	35.4	(3.1)	35.5	(1.3)	48.4	(2.1)	68.2	(2.3)	33.2	(3.6)	27.8	(1.3)	38.2	(1.9)	56.1	(2.5)
	New Zealand	35.5	(2.6)	40.7	(1.7)	60.4	(2.2)	81.3	(1.7)	30.6	(2.4)	31.0	(1.4)	50.7	(2.1)	73.3	(1.7)
	Norway	42.2	(1.7)	55.6	(1.2)	77.9	(2.2)	90.4	(2.4)	34.2	(1.9)	44.8	(1.3)	64.8	(2.7)	82.8	(3.1)
	Poland	50.9	(2.0)	51.3	(1.2)	66.3	(2.2)	79.9	(2.9)	39.0	(2.0)	37.8	(1.3)	55.5	(2.1)	74.4	(2.8)
	Portugal	61.9	(1.8)	75.1	(1.2)	88.6	(1.8)	96.9	(2.3)	60.6	(2.0)	65.8	(1.4)	78.1	(2.1)	90.1	(3.7)
	Slovak Republic	54.1	(2.3)	59.5	(1.2)	66.5	(1.9)	69.9	(2.9)	51.4	(2.1)	49.5	(1.3)	52.5	(2.5)	57.2	(4.2)
	Spain	38.7	(1.4)	46.6	(0.8)	70.1	(1.9)	86.4	(1.7)	37.3	(1.8)	46.7	(0.9)	72.8	(1.3)	88.8	(1.5)
	Sweden	35.0	(2.4)	52.0	(1.2)	73.8	(1.6)	89.4	(1.9)	29.6	(2.4)	44.1	(1.3)	67.3	(1.7)	84.1	(2.5)
	Switzerland	43.9	(1.7)	55.3	(1.1)	68.6	(1.4)	78.0	(2.0)	38.8	(1.9)	47.4	(1.1)	58.9	(1.5)	68.2	(2.4)
	Turkey	59.6	(1.6)	64.7	(1.6)	83.3	(2.1)	c	c	51.2	(1.5)	53.3	(1.5)	66.4	(3.1)	c	c
	United Kingdom	38.0	(2.0)	46.8	(1.0)	62.4	(1.5)	81.0	(1.4)	30.2	(1.6)	35.2	(1.0)	51.6	(1.6)	72.4	(1.8)
	United States	55.5	(1.6)	58.6	(1.3)	76.1	(1.5)	87.6	(1.8)	52.7	(2.5)	44.0	(1.4)	62.6	(2.2)	78.7	(2.4)
	OECD average	41.3	(0.4)	49.7	(0.2)	66.2	(0.3)	80.1	(0.4)	36.0	(0.4)	40.0	(0.2)	54.9	(0.4)	70.0	(0.5)
Partners	Argentina	63.8	(1.8)	67.9	(1.4)	71.8	(5.3)	c	c	56.3	(1.7)	56.2	(1.8)	61.9	(5.1)	c	c
	Azerbaijan	75.4	(1.6)	78.5	(1.9)	c	c	c	c	71.7	(1.6)	74.2	(1.9)	c	c	c	c
	Brazil	60.7	(1.1)	69.1	(1.3)	77.8	(3.1)	c	c	60.5	(1.4)	62.9	(1.6)	74.3	(4.7)	c	c
	Bulgaria	66.7	(1.5)	70.8	(1.4)	75.4	(2.4)	80.0	(4.3)	64.4	(2.0)	60.3	(1.6)	63.3	(2.4)	72.2	(4.9)
	Chile	52.1	(1.5)	62.7	(1.2)	81.3	(2.9)	c	c	41.9	(1.5)	50.3	(1.3)	71.3	(3.0)	c	c
	Colombia	81.9	(1.3)	87.3	(1.3)	c	c	c	c	76.5	(1.5)	80.5	(1.8)	c	c	c	c
	Croatia	48.0	(2.6)	54.0	(1.3)	64.7	(2.3)	76.0	(3.3)	38.0	(2.6)	32.6	(1.1)	36.3	(2.0)	46.0	(3.2)
	Estonia	53.1	(4.0)	65.4	(1.2)	75.2	(1.5)	85.2	(2.2)	43.2	(4.7)	51.0	(1.3)	61.1	(1.7)	72.9	(2.5)
	Hong Kong-China	33.6	(4.1)	39.1	(1.8)	51.6	(2.0)	68.1	(2.3)	27.8	(4.2)	29.0	(1.5)	39.4	(1.9)	53.9	(2.3)
	Indonesia	55.1	(1.3)	40.9	(2.3)	c	c	c	c	49.7	(1.4)	31.1	(1.7)	c	c	c	c
	Israel	49.0	(1.5)	60.3	(1.4)	76.9	(2.2)	86.6	(2.5)	47.1	(1.6)	54.7	(1.4)	70.5	(2.6)	79.1	(3.1)
	Jordan	73.4	(1.1)	81.5	(1.0)	92.4	(1.6)	c	c	68.5	(1.3)	73.6	(1.3)	86.8	(3.1)	c	c
	Kyrgyzstan	78.4	(0.8)	71.2	(2.1)	c	c	c	c	79.5	(0.8)	67.3	(1.9)	c	c	c	c
	Latvia	51.4	(3.3)	56.0	(1.7)	66.7	(2.8)	77.6	(5.1)	46.7	(2.5)	41.7	(1.3)	48.1	(2.9)	58.4	(4.6)
	Liechtenstein	46.8	(8.8)	56.0	(4.1)	63.9	(6.4)	68.5	(8.8)	37.5	(8.0)	43.9	(4.0)	56.4	(5.2)	62.7	(8.4)
	Lithuania	39.2	(1.9)	44.3	(1.3)	64.0	(2.1)	74.0	(3.6)	28.4	(1.9)	24.1	(1.3)	35.7	(2.3)	49.4	(3.6)
	Macao-China	42.6	(2.5)	46.1	(1.4)	56.0	(2.4)	68.3	(4.1)	38.7	(3.1)	36.2	(1.5)	42.9	(2.5)	58.5	(4.5)
	Montenegro	75.8	(1.2)	80.5	(1.3)	90.7	(4.9)	c	c	62.0	(1.3)	56.3	(1.3)	62.7	(5.8)	c	c
	Qatar	68.3	(0.7)	78.4	(1.4)	c	c	c	c	63.4	(0.8)	70.7	(2.0)	c	c	c	c
	Romania	64.7	(2.0)	68.9	(1.4)	76.2	(3.5)	c	c	62.8	(2.0)	57.6	(1.5)	58.5	(4.9)	c	c
	Russian Federation	54.3	(2.3)	64.0	(1.7)	76.0	(2.3)	86.7	(3.1)	50.6	(2.5)	55.4	(1.7)	64.5	(2.5)	77.6	(3.4)
	Serbia	58.5	(1.5)	61.9	(1.3)	74.9	(2.9)	c	c	59.6	(1.5)	55.3	(1.3)	66.3	(3.5)	c	c
	Slovenia	64.0	(2.2)	62.4	(1.2)	63.9	(2.3)	71.3	(3.0)	56.6	(1.9)	48.0	(1.0)	46.3	(2.1)	54.5	(2.8)
	Chinese Taipei	37.1	(2.6)	30.0	(1.2)	41.7	(1.3)	54.7	(1.5)	34.5	(2.9)	21.5	(1.2)	29.7	(1.1)	41.7	(2.0)
	Thailand	81.6	(1.0)	79.6	(1.0)	86.0	(2.8)	c	c	79.5	(1.1)	74.1	(1.2)	79.0	(3.8)	c	c
	Tunisia	71.4	(1.1)	80.4	(1.4)	c	c	c	c	66.4	(1.4)	73.1	(1.7)	c	c	c	c
	Uruguay	62.2	(1.7)	70.4	(1.3)	85.0	(2.8)	c	c	60.6	(1.9)	64.9	(1.4)	74.9	(3.5)	c	c

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[Part 3/3]

Table A3.9b Self-concept in science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		When I am being taught science, I can understand the concepts very well								I can easily understand new ideas in science							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	37.1	(1.9)	50.6	(0.9)	69.7	(1.2)	85.6	(1.2)	36.8	(1.8)	50.2	(1.0)	68.8	(1.1)	83.9	(1.1)
	Austria	45.7	(2.4)	55.4	(1.3)	75.8	(1.6)	84.9	(1.7)	42.4	(2.9)	44.5	(1.3)	61.5	(1.9)	76.4	(2.5)
	Belgium	43.9	(2.3)	50.8	(1.2)	64.9	(1.6)	78.0	(1.8)	40.6	(2.2)	44.2	(1.4)	57.5	(1.6)	74.3	(1.6)
	Canada	46.3	(2.0)	59.7	(0.9)	77.2	(1.1)	89.5	(1.2)	46.7	(2.2)	58.1	(1.0)	76.1	(1.2)	89.4	(1.0)
	Czech Republic	47.9	(3.0)	58.6	(1.3)	65.6	(2.1)	70.1	(2.8)	49.7	(3.1)	57.4	(1.5)	62.3	(2.0)	67.6	(2.5)
	Denmark	41.4	(2.1)	54.9	(1.3)	78.0	(1.7)	88.3	(2.3)	38.0	(2.2)	47.5	(1.4)	71.0	(2.4)	84.4	(2.6)
	Finland	29.7	(4.8)	40.6	(1.4)	55.7	(1.7)	73.2	(1.9)	36.2	(4.3)	48.5	(1.5)	67.0	(1.5)	80.6	(1.6)
	France	44.7	(1.8)	51.9	(1.2)	65.8	(1.9)	83.2	(2.4)	40.8	(2.1)	46.4	(1.3)	61.3	(1.7)	79.6	(2.4)
	Germany	50.5	(2.8)	55.9	(1.2)	68.0	(1.6)	80.4	(1.8)	48.3	(2.8)	57.6	(1.4)	69.2	(1.8)	81.5	(1.8)
	Greece	49.1	(2.1)	53.3	(1.1)	67.4	(2.0)	79.7	(4.9)	49.8	(1.9)	52.4	(1.2)	66.1	(1.9)	78.2	(4.5)
	Hungary	45.0	(3.1)	44.5	(1.1)	56.6	(2.0)	76.2	(3.1)	45.2	(3.3)	42.0	(1.2)	53.6	(2.3)	71.4	(2.8)
	Iceland	34.6	(1.9)	56.0	(1.2)	77.8	(2.4)	90.7	(2.6)	37.4	(2.1)	56.3	(1.2)	81.5	(1.9)	94.4	(1.8)
	Ireland	36.9	(2.6)	48.5	(1.3)	72.5	(1.8)	85.2	(2.4)	34.6	(2.8)	43.7	(1.4)	66.3	(1.7)	80.1	(2.2)
	Italy	59.0	(1.1)	62.4	(0.9)	71.9	(1.9)	82.1	(1.9)	53.6	(1.2)	54.4	(0.9)	65.7	(1.8)	79.5	(2.0)
	Japan	22.2	(1.9)	32.2	(1.2)	43.9	(1.5)	57.0	(2.1)	15.7	(1.5)	15.0	(0.8)	18.3	(1.4)	27.0	(2.0)
	Korea	13.6	(1.7)	20.6	(1.0)	41.7	(1.5)	57.2	(2.7)	16.4	(1.9)	23.5	(1.1)	39.5	(1.5)	55.9	(2.7)
	Luxembourg	50.8	(1.7)	56.9	(1.1)	71.5	(1.6)	82.9	(2.4)	50.0	(1.6)	57.2	(1.1)	73.6	(1.8)	86.8	(2.5)
	Mexico	73.1	(0.8)	75.5	(0.9)	84.5	(2.0)	c	c	72.4	(0.9)	74.0	(0.9)	84.4	(2.1)	c	c
	Netherlands	39.3	(3.7)	46.3	(1.3)	65.5	(1.4)	83.3	(1.7)	40.2	(3.3)	38.2	(1.4)	50.0	(2.0)	73.7	(2.1)
	New Zealand	43.5	(2.4)	48.5	(1.4)	64.3	(1.9)	83.3	(1.7)	43.6	(2.4)	47.3	(1.5)	63.8	(2.1)	81.0	(1.7)
	Norway	41.9	(2.2)	53.4	(1.2)	75.4	(2.6)	89.7	(3.2)	40.8	(2.4)	50.9	(1.3)	70.6	(2.5)	87.6	(2.2)
	Poland	55.0	(2.1)	60.8	(1.2)	74.5	(1.6)	84.7	(2.4)	44.7	(2.1)	50.7	(1.2)	66.0	(1.7)	77.5	(2.8)
	Portugal	63.5	(2.0)	71.1	(1.3)	80.8	(2.3)	92.1	(2.7)	61.4	(2.2)	69.6	(1.3)	83.1	(1.9)	93.1	(2.5)
	Slovak Republic	63.5	(2.2)	75.6	(1.0)	84.9	(1.6)	88.6	(2.3)	58.9	(2.0)	63.8	(1.2)	73.8	(1.9)	78.3	(2.8)
	Spain	43.1	(1.9)	49.6	(0.9)	70.2	(1.2)	85.8	(2.0)	38.3	(1.4)	45.7	(0.8)	68.4	(1.3)	84.2	(2.2)
	Sweden	37.4	(2.4)	51.7	(1.4)	70.2	(2.0)	87.3	(1.9)	33.1	(2.2)	46.4	(1.3)	67.1	(2.2)	87.4	(2.4)
	Switzerland	42.7	(1.6)	52.9	(1.1)	67.3	(1.6)	79.8	(1.7)	43.9	(1.8)	53.2	(1.3)	67.1	(1.5)	80.1	(1.9)
	Turkey	58.4	(1.4)	62.6	(1.5)	77.2	(2.9)	c	c	59.1	(1.7)	65.4	(1.5)	82.9	(2.3)	c	c
	United Kingdom	48.0	(1.9)	56.9	(0.9)	72.6	(1.6)	87.3	(1.5)	49.4	(1.9)	57.4	(1.0)	70.9	(1.4)	84.6	(1.3)
	United States	60.0	(1.7)	66.7	(1.2)	88.0	(1.7)	95.5	(1.1)	49.1	(1.8)	54.2	(1.3)	74.6	(1.8)	87.6	(1.7)
	OECD average	44.2	(0.4)	53.1	(0.2)	69.2	(0.3)	82.2	(0.4)	42.3	(0.4)	49.2	(0.2)	64.8	(0.3)	78.8	(0.4)
Partners	Argentina	65.8	(1.6)	67.5	(1.5)	71.4	(5.5)	c	c	60.4	(1.4)	61.7	(1.6)	68.9	(4.7)	c	c
	Azerbaijan	78.0	(1.5)	81.4	(1.4)	c	c	c	c	75.5	(1.3)	78.3	(1.5)	c	c	c	c
	Brazil	68.4	(1.0)	68.6	(1.3)	71.9	(4.1)	c	c	63.0	(1.2)	59.0	(1.3)	66.7	(3.9)	c	c
	Bulgaria	67.5	(1.5)	68.4	(1.4)	71.9	(2.3)	79.3	(5.4)	67.6	(1.7)	68.5	(1.5)	68.9	(2.3)	79.3	(6.3)
	Chile	59.3	(1.6)	65.6	(1.2)	80.3	(2.6)	c	c	59.3	(1.5)	65.1	(1.2)	79.8	(3.1)	c	c
	Colombia	84.3	(1.3)	85.4	(1.2)	c	c	c	c	83.6	(1.2)	86.8	(1.4)	c	c	c	c
	Croatia	51.9	(2.8)	56.1	(1.1)	65.2	(2.0)	72.9	(3.0)	49.3	(2.6)	56.0	(1.0)	67.1	(1.7)	78.4	(3.0)
	Estonia	51.7	(3.1)	58.0	(1.2)	69.5	(1.9)	80.5	(2.6)	47.0	(4.0)	57.7	(1.3)	71.1	(1.9)	84.8	(2.4)
	Hong Kong-China	38.4	(4.7)	46.8	(1.5)	60.0	(1.8)	73.0	(2.0)	37.2	(4.2)	43.4	(1.7)	56.2	(1.8)	70.8	(1.7)
	Indonesia	75.5	(1.0)	64.9	(2.1)	c	c	c	c	69.1	(1.3)	54.4	(1.9)	c	c	c	c
	Israel	58.2	(1.5)	71.2	(1.3)	84.2	(1.5)	91.7	(2.4)	54.8	(1.6)	65.9	(1.4)	78.1	(1.9)	86.7	(2.9)
	Jordan	77.8	(1.1)	85.7	(1.1)	93.7	(1.7)	c	c	75.0	(1.1)	81.8	(1.0)	92.5	(2.2)	c	c
	Kyrgyzstan	81.7	(0.7)	72.6	(2.1)	c	c	c	c	78.0	(0.9)	61.7	(2.1)	c	c	c	c
	Latvia	51.7	(3.0)	51.4	(1.5)	58.5	(2.4)	69.4	(4.0)	49.5	(3.4)	53.2	(1.3)	64.1	(2.4)	75.9	(4.1)
	Liechtenstein	43.8	(8.9)	55.6	(3.8)	63.0	(5.3)	70.8	(7.7)	38.8	(9.7)	51.4	(4.5)	60.9	(5.9)	66.5	(7.1)
	Lithuania	36.0	(2.0)	36.5	(1.3)	52.0	(2.0)	68.2	(3.9)	37.4	(1.9)	39.5	(1.1)	53.4	(2.3)	66.5	(3.7)
	Macao-China	48.0	(3.1)	50.3	(1.4)	61.0	(2.5)	71.7	(5.1)	45.0	(3.1)	45.0	(1.5)	55.7	(2.8)	69.7	(4.3)
	Montenegro	74.6	(1.1)	78.7	(1.1)	86.1	(4.8)	c	c	73.0	(1.1)	70.9	(1.2)	77.4	(4.5)	c	c
	Qatar	73.9	(0.6)	86.5	(1.1)	c	c	c	c	70.9	(0.6)	78.6	(1.4)	c	c	c	c
	Romania	66.9	(1.7)	67.3	(1.2)	76.3	(3.2)	c	c	66.5	(1.4)	65.8	(1.6)	73.4	(4.5)	c	c
	Russian Federation	62.5	(2.2)	64.9	(1.7)	71.5	(2.7)	84.3	(3.4)	53.3	(2.6)	55.9	(1.8)	65.3	(3.2)	79.6	(3.3)
	Serbia	66.8	(1.3)	75.7	(1.0)	87.5	(1.9)	c	c	62.0	(1.7)	62.1	(1.4)	75.0	(2.5)	c	c
	Slovenia	61.6	(2.6)	61.8	(1.1)	67.4	(1.7)	73.6	(2.9)	56.3	(2.4)	50.9	(1.1)	57.2	(1.7)	68.2	(2.3)
	Chinese Taipei	45.8	(2.4)	40.3	(1.2)	52.8	(1.3)	65.5	(1.8)	43.3	(2.7)	37.7	(1.2)	51.1	(1.2)	63.3	(1.8)
	Thailand	84.8	(0.9)	83.3	(0.8)	88.1	(3.1)	c	c	85.8	(0.8)	83.5	(0.8)	85.9	(3.4)	c	c
	Tunisia	77.9	(1.2)	85.2	(1.2)	c	c	c	c	72.2	(1.2)	76.5	(1.4)	c	c	c	c
	Uruguay	67.0	(1.8)	71.7	(1.2)	83.6	(3.1)	c	c	60.7	(1.9)	65.8	(1.4)	81.0	(2.7)	c	c

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Table A3.10a General value of science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.71	(0.04)	-0.19	(0.02)	0.22	(0.02)	0.50	(0.03)	**-0.28**	(0.03)
	Austria	-0.55	(0.06)	-0.20	(0.02)	0.14	(0.04)	0.31	(0.04)	**-0.17**	(0.06)
	Belgium	-0.52	(0.06)	-0.20	(0.02)	0.00	(0.02)	0.14	(0.04)	**-0.14**	(0.05)
	Canada	-0.36	(0.05)	0.02	(0.02)	0.30	(0.03)	0.58	(0.04)	**-0.28**	(0.05)
	Czech Republic	-0.51	(0.04)	-0.19	(0.03)	0.05	(0.03)	0.26	(0.06)	**-0.21**	(0.07)
	Denmark	-0.53	(0.03)	-0.33	(0.02)	-0.03	(0.03)	0.20	(0.06)	**-0.24**	(0.07)
	Finland	-0.64	(0.08)	-0.13	(0.02)	0.18	(0.02)	0.44	(0.03)	**-0.26**	(0.04)
	France	-0.50	(0.04)	-0.21	(0.03)	0.05	(0.04)	0.26	(0.05)	**-0.21**	(0.06)
	Germany	-0.70	(0.06)	-0.17	(0.03)	0.16	(0.04)	0.32	(0.05)	**-0.16**	(0.07)
	Greece	-0.32	(0.04)	-0.03	(0.02)	0.27	(0.03)	0.42	(0.09)	-0.16	(0.10)
	Hungary	-0.37	(0.05)	-0.08	(0.02)	0.15	(0.03)	0.41	(0.06)	**-0.26**	(0.07)
	Iceland	-0.74	(0.05)	-0.22	(0.02)	0.20	(0.03)	0.52	(0.07)	**-0.33**	(0.08)
	Ireland	-0.54	(0.05)	-0.04	(0.03)	0.33	(0.04)	0.56	(0.05)	**-0.24**	(0.06)
	Italy	-0.32	(0.02)	0.02	(0.01)	0.28	(0.02)	0.47	(0.05)	**-0.18**	(0.06)
	Japan	-0.87	(0.05)	-0.24	(0.03)	0.02	(0.03)	0.21	(0.04)	**-0.19**	(0.06)
	Korea	-0.27	(0.06)	0.24	(0.02)	0.42	(0.03)	0.58	(0.06)	**-0.16**	(0.07)
	Luxembourg	-0.48	(0.05)	-0.02	(0.02)	0.31	(0.04)	0.59	(0.06)	**-0.28**	(0.07)
	Mexico	0.21	(0.02)	0.51	(0.02)	0.76	(0.09)	c	c	c	c
	Netherlands	-0.73	(0.06)	-0.34	(0.02)	0.01	(0.03)	0.23	(0.04)	**-0.22**	(0.04)
	New Zealand	-0.65	(0.05)	-0.28	(0.02)	0.06	(0.03)	0.35	(0.04)	**-0.29**	(0.06)
	Norway	-0.67	(0.05)	-0.15	(0.03)	0.28	(0.04)	0.53	(0.07)	**-0.25**	(0.08)
	Poland	-0.18	(0.04)	0.19	(0.02)	0.49	(0.03)	0.70	(0.05)	**-0.21**	(0.06)
	Portugal	0.01	(0.04)	0.41	(0.02)	0.69	(0.04)	0.87	(0.08)	**-0.18**	(0.09)
	Slovak Republic	-0.33	(0.04)	0.01	(0.02)	0.30	(0.03)	0.52	(0.07)	**-0.22**	(0.08)
	Spain	-0.07	(0.04)	0.29	(0.02)	0.57	(0.03)	0.74	(0.06)	**-0.16**	(0.07)
	Sweden	-0.73	(0.07)	-0.24	(0.03)	0.13	(0.03)	0.46	(0.05)	**-0.33**	(0.07)
	Switzerland	-0.52	(0.04)	-0.15	(0.02)	0.08	(0.02)	0.30	(0.04)	**-0.21**	(0.05)
	Turkey	0.12	(0.03)	0.70	(0.03)	1.09	(0.09)	c	c	c	c
	United Kingdom	-0.69	(0.03)	-0.27	(0.02)	0.12	(0.03)	0.40	(0.04)	**-0.28**	(0.05)
	United States	-0.30	(0.04)	0.14	(0.03)	0.49	(0.04)	0.70	(0.06)	**-0.21**	(0.07)
	OECD average	-0.49	(0.01)	-0.08	(0.00)	0.22	(0.01)	0.45	(0.01)	**-0.23**	(0.01)
Partners	Argentina	-0.03	(0.03)	0.12	(0.04)	0.29	(0.14)	c	c	c	c
	Azerbaijan	0.45	(0.02)	0.73	(0.04)	c	c	c	c	c	c
	Bulgaria	0.12	(0.02)	0.45	(0.03)	0.63	(0.06)	c	c	c	c
	Brazil	0.05	(0.03)	0.36	(0.03)	0.55	(0.06)	0.59	(0.11)	-0.04	(0.13)
	Chile	0.38	(0.03)	0.67	(0.02)	0.88	(0.05)	c	c	c	c
	Colombia	0.39	(0.02)	0.57	(0.03)	c	c	c	c	c	c
	Estonia	-0.15	(0.03)	0.13	(0.02)	0.40	(0.04)	0.48	(0.07)	-0.08	(0.08)
	Hong Kong-China	-0.40	(0.06)	0.02	(0.02)	0.36	(0.03)	0.61	(0.04)	**-0.25**	(0.06)
	Croatia	-0.07	(0.06)	0.49	(0.03)	0.68	(0.03)	0.80	(0.04)	**-0.12**	(0.05)
	Indonesia	0.23	(0.02)	0.44	(0.03)	c	c	c	c	c	c
	Israel	-0.09	(0.04)	0.33	(0.03)	0.56	(0.06)	0.67	(0.10)	-0.11	(0.14)
	Jordan	0.31	(0.03)	0.79	(0.02)	1.04	(0.06)	c	c	c	c
	Kyrgyzstan	0.38	(0.02)	0.60	(0.05)	c	c	c	c	c	c
	Liechtenstein	-0.26	(0.05)	-0.01	(0.02)	0.26	(0.04)	0.48	(0.07)	**-0.21**	(0.08)
	Lithuania	-0.77	(0.17)	-0.09	(0.08)	-0.02	(0.12)	0.05	(0.13)	-0.06	(0.19)
	Latvia	-0.20	(0.04)	0.14	(0.03)	0.47	(0.05)	0.63	(0.08)	-0.15	(0.12)
	Macao-China	0.17	(0.05)	0.53	(0.02)	0.69	(0.03)	0.71	(0.08)	-0.03	(0.09)
	Montenegro	0.12	(0.03)	0.35	(0.03)	0.60	(0.12)	c	c	c	c
	Qatar	0.28	(0.02)	0.89	(0.03)	c	c	c	c	c	c
	Romania	-0.02	(0.03)	0.41	(0.02)	0.62	(0.08)	c	c	c	c
	Russian Federation	-0.18	(0.03)	0.03	(0.02)	0.20	(0.03)	0.30	(0.06)	-0.10	(0.07)
	Serbia	-0.06	(0.03)	0.12	(0.02)	0.34	(0.05)	c	c	c	c
	Slovenia	-0.37	(0.05)	-0.07	(0.02)	0.22	(0.03)	0.44	(0.06)	**-0.23**	(0.08)
	Chinese Taipei	0.20	(0.05)	0.69	(0.02)	0.86	(0.03)	0.93	(0.04)	-0.07	(0.05)
	Thailand	0.56	(0.03)	0.93	(0.03)	1.20	(0.08)	c	c	c	c
	Tunisia	0.53	(0.02)	1.00	(0.03)	c	c	c	c	c	c
	Uruguay	-0.18	(0.03)	-0.08	(0.02)	0.18	(0.05)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/3]

Table A3.10b General value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Advances in science and technology usually help improve the economy								Science is important for helping us to understand the natural world							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	74.6	(1.5)	89.5	(0.5)	96.1	(0.4)	97.2	(0.4)	82.1	(1.3)	93.4	(0.4)	97.0	(0.4)	98.0	(0.4)
	Austria	74.4	(2.3)	89.4	(0.7)	95.6	(0.6)	96.6	(0.8)	82.9	(1.7)	88.7	(0.8)	93.9	(0.9)	95.6	(1.2)
	Belgium	81.3	(1.9)	91.4	(0.5)	93.6	(0.7)	95.6	(0.8)	84.3	(1.5)	92.1	(0.5)	93.9	(0.6)	95.5	(0.7)
	Canada	81.2	(1.7)	91.4	(0.5)	94.0	(0.7)	95.9	(0.9)	87.8	(1.2)	94.6	(0.4)	95.9	(0.5)	97.6	(0.5)
	Czech Republic	81.9	(1.7)	87.5	(0.9)	91.7	(1.3)	93.0	(1.6)	87.1	(1.9)	94.6	(0.6)	97.4	(0.6)	97.3	(0.7)
	Denmark	82.1	(1.2)	92.4	(0.6)	95.1	(0.9)	95.7	(1.4)	88.2	(1.3)	93.3	(0.6)	97.7	(0.7)	98.3	(0.9)
	Finland	79.2	(2.9)	93.1	(0.6)	96.4	(0.6)	96.5	(0.7)	78.4	(3.2)	94.3	(0.5)	97.7	(0.4)	98.5	(0.4)
	France	87.4	(1.1)	93.8	(0.5)	95.6	(0.8)	95.5	(1.3)	89.1	(1.0)	94.3	(0.6)	96.7	(0.7)	98.3	(0.9)
	Germany	70.7	(2.0)	88.5	(0.8)	96.1	(0.8)	96.4	(0.8)	77.3	(2.0)	90.5	(0.8)	95.9	(0.8)	97.5	(0.7)
	Greece	88.1	(1.4)	95.9	(0.5)	97.7	(0.7)	96.0	(1.6)	88.0	(1.1)	93.7	(0.5)	96.6	(0.8)	97.5	(2.2)
	Hungary	80.7	(1.6)	89.6	(0.7)	92.7	(1.0)	95.1	(1.3)	84.7	(1.8)	94.5	(0.5)	97.0	(0.6)	98.7	(0.7)
	Iceland	75.1	(1.7)	91.9	(0.7)	97.1	(0.8)	98.8	(0.7)	80.8	(1.5)	94.5	(0.5)	98.3	(0.5)	99.6	(0.5)
	Ireland	80.7	(1.6)	93.1	(0.6)	96.8	(0.7)	97.1	(0.8)	88.1	(1.6)	94.2	(0.6)	97.2	(0.6)	97.5	(0.9)
	Italy	88.3	(0.8)	95.2	(0.3)	97.4	(0.4)	97.4	(0.9)	90.7	(1.0)	96.8	(0.3)	98.4	(0.3)	98.4	(0.7)
	Japan	65.4	(2.7)	87.5	(0.7)	91.9	(0.9)	92.8	(1.2)	66.6	(2.2)	80.6	(0.9)	85.0	(1.4)	89.1	(1.5)
	Korea	81.6	(2.0)	96.4	(0.5)	98.9	(0.3)	98.6	(0.6)	79.9	(1.9)	85.1	(0.8)	88.0	(1.2)	90.7	(1.4)
	Luxembourg	78.7	(1.6)	90.1	(0.7)	95.2	(0.9)	97.7	(1.2)	84.4	(1.2)	92.6	(0.5)	94.5	(1.0)	98.2	(1.1)
	Mexico	93.8	(0.6)	97.0	(0.3)	98.6	(0.7)	c	c	94.2	(0.7)	96.6	(0.3)	98.3	(0.7)	c	c
	Netherlands	75.4	(2.6)	88.1	(0.7)	94.2	(1.0)	95.7	(1.1)	76.3	(2.3)	85.8	(0.9)	89.4	(1.0)	90.4	(1.5)
	New Zealand	73.5	(2.2)	87.5	(0.8)	94.8	(1.1)	95.4	(1.0)	84.1	(1.7)	93.0	(0.6)	95.7	(0.8)	97.3	(0.6)
	Norway	72.5	(2.0)	90.2	(0.7)	96.2	(1.1)	95.2	(1.8)	78.6	(1.8)	92.4	(0.7)	97.2	(0.8)	99.2	(0.5)
	Poland	89.5	(1.2)	95.5	(0.6)	97.1	(0.7)	97.7	(0.8)	91.7	(1.1)	98.0	(0.3)	98.7	(0.4)	99.5	(0.3)
	Portugal	94.7	(0.7)	98.6	(0.2)	99.4	(0.3)	99.5	(0.8)	95.8	(0.8)	99.1	(0.2)	99.5	(0.3)	99.4	(0.6)
	Slovak Republic	88.3	(1.3)	92.5	(0.6)	93.5	(0.8)	95.4	(1.2)	91.0	(1.2)	95.7	(0.5)	97.9	(0.5)	97.9	(1.3)
	Spain	91.1	(0.9)	97.7	(0.3)	98.8	(0.3)	98.7	(0.7)	91.0	(1.0)	95.6	(0.4)	97.4	(0.6)	98.6	(0.8)
	Sweden	72.7	(2.6)	89.9	(0.8)	96.1	(0.8)	97.0	(1.1)	79.7	(2.5)	93.2	(0.7)	96.8	(0.9)	99.3	(0.6)
	Switzerland	75.8	(1.5)	90.1	(0.7)	94.6	(0.8)	96.0	(0.8)	83.7	(1.1)	93.3	(0.4)	96.8	(0.4)	97.6	(0.6)
	Turkey	90.9	(0.9)	97.5	(0.5)	99.3	(0.7)	c	c	90.4	(0.8)	96.3	(0.5)	98.1	(0.9)	c	c
	United Kingdom	77.5	(1.3)	89.5	(0.6)	96.1	(0.7)	97.2	(0.7)	86.1	(1.4)	94.2	(0.4)	97.5	(0.5)	98.5	(0.6)
	United States	81.2	(1.2)	93.7	(0.6)	97.6	(0.7)	97.7	(0.9)	88.5	(1.0)	95.5	(0.4)	97.5	(0.7)	98.3	(0.6)
	OECD average	80.1	(0.3)	91.8	(0.1)	95.7	(0.1)	96.5	(0.2)	84.5	(0.3)	93.0	(0.1)	95.9	(0.1)	97.2	(0.2)
Partners	Argentina	90.7	(0.7)	94.9	(0.7)	95.5	(2.5)	c	c	92.7	(0.8)	94.9	(1.0)	95.3	(3.0)	c	c
	Azerbaijan	92.6	(0.7)	96.9	(0.8)	c	c	c	c	92.5	(0.6)	97.1	(0.5)	c	c	c	c
	Brazil	92.2	(0.5)	96.6	(0.5)	97.3	(1.4)	c	c	94.3	(0.5)	97.7	(0.4)	99.5	(0.4)	c	c
	Bulgaria	90.2	(0.9)	95.0	(0.7)	96.6	(1.0)	98.1	(1.4)	92.4	(1.0)	96.8	(0.5)	97.8	(0.9)	95.8	(2.0)
	Chile	92.0	(0.6)	96.4	(0.5)	96.8	(1.0)	c	c	96.3	(0.5)	97.6	(0.4)	97.7	(0.7)	c	c
	Colombia	94.3	(0.9)	96.7	(0.6)	c	c	c	c	98.9	(0.3)	99.2	(0.3)	c	c	c	c
	Croatia	92.9	(0.8)	96.1	(0.3)	96.7	(0.7)	97.0	(1.2)	93.1	(0.8)	97.2	(0.3)	98.3	(0.6)	98.9	(0.7)
	Estonia	83.7	(2.7)	93.6	(0.6)	97.0	(0.6)	98.0	(0.7)	85.0	(2.5)	93.7	(0.6)	97.6	(0.5)	99.1	(0.4)
	Hong Kong-China	93.7	(1.2)	98.7	(0.3)	98.6	(0.4)	98.3	(0.6)	86.7	(1.7)	95.8	(0.5)	95.9	(0.6)	97.8	(0.6)
	Indonesia	97.1	(0.3)	99.2	(0.3)	c	c	c	c	97.7	(0.3)	99.3	(0.2)	c	c	c	c
	Israel	88.0	(1.0)	94.6	(0.7)	95.9	(1.1)	97.0	(1.4)	88.0	(0.9)	94.0	(0.6)	96.4	(0.8)	97.7	(1.2)
	Jordan	90.1	(0.7)	94.0	(0.5)	93.5	(1.8)	c	c	91.1	(0.8)	98.1	(0.3)	98.7	(0.8)	c	c
	Kyrgyzstan	93.1	(0.5)	95.5	(0.7)	c	c	c	c	89.3	(0.6)	96.1	(0.7)	c	c	c	c
	Latvia	87.6	(1.7)	94.7	(0.4)	97.2	(0.7)	97.9	(1.7)	92.4	(1.3)	96.7	(0.5)	98.0	(0.7)	98.9	(0.9)
	Liechtenstein	67.4	(7.6)	92.6	(2.6)	97.7	(2.5)	96.6	(3.2)	78.1	(6.6)	91.7	(2.3)	96.8	(2.4)	94.3	(4.3)
	Lithuania	87.4	(1.2)	96.2	(0.3)	98.3	(0.5)	98.6	(0.8)	92.9	(0.9)	98.6	(0.2)	99.8	(0.2)	99.9	(0.3)
	Macao-China	95.9	(1.2)	98.5	(0.3)	98.5	(0.6)	98.1	(1.4)	94.9	(1.0)	98.8	(0.2)	99.2	(0.5)	99.6	(0.4)
	Montenegro	92.7	(0.6)	94.5	(0.7)	94.5	(2.6)	c	c	93.5	(0.6)	95.0	(0.7)	98.6	(1.5)	c	c
	Qatar	90.1	(0.5)	97.4	(0.5)	c	c	c	c	89.5	(0.4)	98.7	(0.4)	c	c	c	c
	Romania	91.4	(1.0)	96.9	(0.5)	95.6	(1.9)	c	c	94.5	(0.9)	98.4	(0.4)	98.9	(0.8)	c	c
	Russian Federation	84.6	(1.5)	91.3	(0.7)	94.8	(1.0)	94.1	(1.6)	92.7	(0.9)	96.3	(0.4)	96.9	(0.9)	97.1	(1.8)
	Serbia	91.7	(0.8)	94.3	(0.6)	95.0	(1.4)	c	c	92.3	(0.7)	91.1	(0.6)	93.0	(1.6)	c	c
	Slovenia	85.4	(1.7)	91.7	(0.7)	94.7	(0.8)	95.5	(1.1)	88.0	(1.3)	94.7	(0.5)	98.0	(0.7)	98.7	(0.8)
	Chinese Taipei	93.3	(1.0)	98.6	(0.2)	99.1	(0.2)	99.0	(0.3)	91.7	(1.1)	96.1	(0.4)	97.6	(0.5)	97.9	(0.5)
	Thailand	97.4	(0.4)	98.6	(0.3)	97.8	(1.2)	c	c	96.8	(0.5)	97.7	(0.4)	97.8	(1.1)	c	c
	Tunisia	94.8	(0.5)	98.0	(0.4)	c	c	c	c	94.2	(0.5)	98.4	(0.3)	c	c	c	c
	Uruguay	91.3	(0.9)	95.0	(0.6)	95.6	(1.6)	c	c	96.0	(0.6)	97.8	(0.3)	98.5	(0.6)	c	c



[Part 2/3]

Table A3.10b General value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Advances in science and technology usually help improve the economy								Science is valuable to society							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	69.0	(1.4)	84.2	(0.5)	89.8	(0.7)	92.3	(0.8)	70.7	(1.4)	87.7	(0.5)	96.3	(0.4)	98.3	(0.4)
	Austria	58.0	(2.4)	76.3	(0.9)	88.9	(1.3)	92.1	(1.3)	61.7	(2.8)	64.0	(1.1)	69.9	(1.7)	74.3	(2.5)
	Belgium	64.9	(1.8)	76.3	(0.8)	84.4	(1.3)	87.7	(1.3)	73.2	(2.3)	85.7	(0.6)	93.0	(0.6)	96.1	(0.7)
	Canada	75.9	(2.2)	84.3	(0.7)	87.6	(0.8)	91.9	(1.0)	79.6	(1.4)	90.9	(0.6)	96.1	(0.5)	98.1	(0.5)
	Czech Republic	65.2	(2.4)	77.6	(1.0)	84.6	(1.6)	87.9	(2.0)	78.0	(1.9)	86.5	(1.0)	90.4	(1.2)	93.6	(1.1)
	Denmark	68.4	(1.7)	71.2	(1.0)	78.3	(1.6)	84.6	(2.5)	88.5	(1.5)	92.5	(0.7)	96.5	(0.7)	97.7	(1.0)
	Finland	65.3	(4.4)	80.1	(0.9)	86.8	(0.9)	91.5	(1.1)	76.6	(4.0)	90.8	(0.7)	95.2	(0.6)	97.2	(0.6)
	France	60.6	(1.7)	63.2	(1.1)	70.0	(1.6)	79.2	(2.5)	73.1	(1.9)	85.3	(0.9)	93.2	(0.8)	96.7	(1.2)
	Germany	54.3	(2.2)	70.6	(1.1)	80.5	(1.4)	84.0	(1.7)	61.0	(2.7)	75.5	(1.0)	81.4	(1.5)	85.2	(2.0)
	Greece	61.1	(2.0)	65.3	(0.9)	75.4	(2.2)	78.1	(3.5)	79.6	(1.3)	87.5	(0.8)	93.4	(1.2)	95.7	(2.0)
	Hungary	76.4	(2.0)	84.7	(0.8)	90.9	(1.2)	94.6	(1.4)	78.5	(2.1)	86.7	(0.7)	90.4	(1.2)	93.3	(1.8)
	Iceland	63.8	(1.9)	75.7	(1.0)	85.2	(1.5)	88.3	(2.4)	71.9	(1.8)	86.6	(0.8)	94.5	(0.9)	95.5	(1.6)
	Ireland	72.1	(2.0)	84.8	(0.9)	89.5	(1.2)	91.2	(1.7)	71.1	(2.1)	84.6	(0.8)	93.4	(1.0)	97.3	(1.1)
	Italy	67.7	(1.2)	77.9	(0.7)	85.2	(0.9)	90.6	(1.4)	78.7	(0.9)	88.6	(0.5)	93.4	(0.6)	95.8	(1.0)
	Japan	60.6	(2.0)	82.1	(0.9)	85.5	(1.1)	87.5	(1.3)	59.3	(2.0)	78.9	(0.9)	87.2	(1.0)	91.9	(1.3)
	Korea	85.0	(1.8)	96.2	(0.4)	97.4	(0.6)	98.0	(0.7)	80.2	(1.8)	90.3	(0.7)	92.5	(0.9)	93.7	(1.3)
	Luxembourg	62.9	(1.9)	75.0	(1.0)	85.6	(1.5)	91.8	(1.9)	69.3	(1.6)	80.4	(0.9)	84.8	(1.7)	90.1	(2.6)
	Mexico	76.7	(0.8)	80.7	(0.9)	87.5	(3.0)	c	c	90.2	(0.7)	93.5	(0.4)	97.5	(0.7)	c	c
	Netherlands	66.1	(2.4)	76.6	(0.9)	87.7	(1.1)	89.9	(1.3)	71.5	(2.3)	84.5	(1.0)	94.2	(0.7)	96.8	(0.8)
	New Zealand	73.0	(2.1)	83.9	(0.9)	90.4	(1.1)	92.0	(1.1)	71.9	(2.4)	83.6	(0.8)	92.5	(0.9)	96.5	(0.7)
	Norway	58.0	(2.2)	69.4	(1.2)	79.6	(2.2)	85.5	(2.3)	74.5	(1.8)	90.0	(0.8)	97.0	(0.9)	99.0	(0.8)
	Poland	83.3	(1.4)	87.2	(0.7)	87.4	(1.5)	90.1	(2.4)	84.5	(1.4)	91.7	(0.6)	95.0	(0.9)	96.8	(1.0)
	Portugal	80.5	(1.4)	86.2	(0.8)	89.1	(1.9)	91.0	(2.3)	90.9	(0.8)	97.6	(0.4)	99.2	(0.4)	100.0	(0.0)
	Slovak Republic	75.0	(1.7)	88.3	(0.7)	93.1	(1.0)	92.8	(1.6)	79.3	(1.6)	90.4	(0.8)	95.2	(1.1)	97.7	(1.1)
	Spain	73.8	(1.6)	78.8	(0.8)	87.4	(1.1)	88.5	(1.7)	79.2	(1.4)	87.9	(0.6)	93.4	(0.8)	96.7	(0.9)
	Sweden	62.1	(2.8)	72.7	(1.0)	80.5	(1.7)	85.2	(2.5)	74.4	(2.5)	88.2	(0.9)	95.3	(1.1)	98.4	(1.0)
	Switzerland	62.5	(1.7)	75.0	(0.7)	85.4	(1.3)	91.0	(1.6)	71.6	(1.5)	79.2	(0.8)	83.5	(1.3)	86.9	(1.7)
	Turkey	79.5	(1.2)	87.4	(0.8)	92.9	(2.1)	c	c	89.0	(1.1)	96.8	(0.6)	99.1	(0.8)	c	c
	United Kingdom	67.3	(1.5)	82.8	(0.8)	87.3	(1.0)	90.1	(1.2)	66.7	(1.6)	82.2	(0.8)	92.4	(1.0)	96.2	(0.7)
	United States	78.4	(1.3)	88.6	(0.9)	90.6	(1.2)	91.6	(1.6)	78.7	(1.3)	91.2	(0.7)	97.4	(0.6)	99.5	(0.4)
	OECD average	68.3	(0.4)	79.1	(0.2)	85.9	(0.3)	89.3	(0.3)	74.8	(0.4)	86.0	(0.1)	92.0	(0.2)	94.8	(0.2)
Partners	Argentina	68.7	(1.2)	68.9	(1.3)	73.6	(6.3)	c	c	84.8	(1.1)	90.9	(0.8)	95.7	(1.6)	c	c
	Azerbaijan	89.1	(0.7)	95.7	(0.8)	c	c	c	c	94.0	(0.6)	96.2	(0.7)	c	c	c	c
	Brazil	73.4	(0.8)	80.6	(1.1)	88.0	(2.5)	c	c	90.6	(0.6)	95.4	(0.6)	97.6	(1.5)	c	c
	Bulgaria	82.0	(1.2)	87.7	(1.1)	88.5	(1.6)	91.4	(2.2)	89.7	(1.0)	95.8	(0.6)	97.3	(1.0)	97.9	(1.4)
	Chile	80.2	(1.0)	85.2	(0.8)	89.6	(1.8)	c	c	88.9	(0.8)	92.2	(0.6)	94.1	(1.3)	c	c
	Colombia	75.4	(1.2)	78.6	(1.2)	c	c	c	c	94.1	(0.5)	95.6	(0.6)	c	c	c	c
	Croatia	77.6	(1.8)	87.7	(0.6)	91.1	(1.1)	91.6	(2.2)	76.7	(1.7)	82.9	(0.9)	91.4	(1.5)	92.9	(1.9)
	Estonia	66.3	(4.2)	84.1	(0.9)	91.8	(1.0)	94.3	(1.3)	82.8	(2.7)	91.6	(0.6)	95.7	(0.7)	96.4	(0.8)
	Hong Kong-China	85.4	(1.9)	92.7	(0.7)	93.5	(1.1)	94.1	(1.2)	84.8	(2.3)	96.6	(0.5)	98.7	(0.4)	99.8	(0.3)
	Indonesia	82.7	(0.8)	86.0	(1.0)	c	c	c	c	93.4	(0.4)	95.2	(0.6)	c	c	c	c
	Israel	72.5	(1.5)	83.2	(1.0)	85.8	(1.7)	89.1	(2.5)	75.3	(1.6)	84.8	(1.2)	90.2	(2.1)	92.7	(2.6)
	Jordan	87.7	(0.8)	95.7	(0.5)	96.5	(1.4)	c	c	87.2	(0.9)	95.0	(0.7)	98.1	(1.3)	c	c
	Kyrgyzstan	89.0	(0.6)	92.9	(1.3)	c	c	c	c	91.9	(0.5)	92.0	(1.3)	c	c	c	c
	Latvia	70.7	(2.4)	80.7	(0.9)	88.0	(1.5)	93.0	(3.0)	82.6	(1.5)	89.8	(0.8)	93.7	(1.8)	94.6	(2.9)
	Liechtenstein	60.2	(7.6)	78.2	(3.7)	81.4	(4.7)	90.9	(4.8)	71.5	(7.9)	77.6	(3.2)	79.6	(5.2)	79.6	(8.7)
	Lithuania	75.2	(2.0)	84.2	(0.9)	90.3	(1.2)	89.2	(2.4)	86.0	(1.6)	92.3	(0.7)	95.5	(1.1)	96.8	(2.3)
	Macao-China	83.4	(2.0)	89.8	(0.6)	90.5	(1.3)	91.4	(2.6)	86.7	(1.6)	94.9	(0.5)	97.4	(0.7)	99.6	(0.6)
	Montenegro	81.1	(1.0)	86.9	(1.0)	91.3	(3.8)	c	c	81.7	(1.0)	85.7	(1.1)	91.1	(3.5)	c	c
	Qatar	79.3	(0.5)	93.0	(1.0)	c	c	c	c	84.0	(0.5)	94.8	(0.8)	c	c	c	c
	Romania	73.9	(1.4)	87.0	(1.0)	92.8	(2.5)	c	c	87.5	(1.3)	93.9	(0.6)	97.2	(1.7)	c	c
	Russian Federation	78.9	(1.7)	83.9	(0.9)	86.5	(1.6)	89.2	(2.6)	83.4	(1.3)	86.4	(0.8)	89.8	(1.2)	92.6	(2.3)
	Serbia	76.2	(1.2)	81.4	(0.9)	86.1	(2.2)	c	c	77.9	(1.2)	84.2	(0.8)	88.7	(1.8)	c	c
	Slovenia	73.2	(1.8)	85.5	(0.8)	91.9	(1.0)	93.8	(1.2)	75.6	(1.9)	82.7	(0.9)	90.8	(1.2)	92.0	(1.6)
	Chinese Taipei	87.5	(1.5)	94.0	(0.5)	95.3	(0.5)	95.6	(0.7)	88.0	(1.2)	95.9	(0.4)	97.2	(0.4)	97.8	(0.6)
	Thailand	94.2	(0.6)	97.7	(0.4)	97.8	(1.4)	c	c	95.3	(0.5)	97.8	(0.3)	98.4	(0.9)	c	c
	Tunisia	80.7	(0.8)	90.6	(0.8)	c	c	c	c	91.6	(0.7)	96.4	(0.6)	c	c	c	c
	Uruguay	63.5	(1.6)	61.0	(1.5)	66.5	(3.3)	c	c	83.3	(1.2)	85.3	(1.0)	89.4	(2.0)	c	c



[Part 3/3]

Table A3.10b General value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements							
		Advances in science and technology usually bring social benefits							
		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	52.5	(1.5)	65.0	(0.6)	75.2	(0.9)	81.9	(1.4)
	Austria	57.9	(2.3)	67.5	(1.0)	72.3	(1.7)	72.7	(2.2)
	Belgium	62.6	(2.2)	67.2	(0.9)	66.4	(1.3)	63.8	(1.8)
	Canada	65.2	(1.8)	73.1	(0.9)	79.5	(1.1)	84.5	(1.3)
	Czech Republic	68.6	(2.2)	82.2	(1.0)	89.7	(1.1)	93.6	(1.4)
	Denmark	57.7	(1.9)	56.1	(1.2)	54.4	(2.2)	58.1	(3.7)
	Finland	65.2	(4.3)	86.2	(1.0)	93.5	(1.1)	94.0	(1.0)
	France	54.2	(2.0)	59.4	(1.3)	66.1	(1.9)	69.9	(3.1)
	Germany	55.1	(2.8)	67.1	(1.0)	71.6	(1.5)	69.9	(2.2)
	Greece	70.0	(1.5)	83.4	(0.8)	89.7	(1.5)	91.4	(2.6)
	Hungary	66.5	(1.9)	73.5	(1.0)	75.6	(1.6)	77.1	(3.0)
	Iceland	48.9	(2.0)	51.8	(1.2)	56.5	(2.0)	62.2	(3.9)
	Ireland	54.1	(2.6)	64.2	(1.2)	75.8	(1.5)	78.2	(2.0)
	Italy	69.1	(1.1)	79.3	(0.7)	83.1	(1.1)	84.8	(1.9)
	Japan	52.6	(2.0)	74.4	(1.1)	82.7	(1.1)	85.9	(1.3)
	Korea	79.6	(1.7)	93.7	(0.5)	94.8	(0.7)	94.8	(1.2)
	Luxembourg	59.3	(2.0)	71.7	(0.8)	80.8	(1.5)	82.1	(2.7)
	Mexico	84.1	(0.6)	88.7	(0.6)	92.3	(1.2)	c	c
	Netherlands	61.2	(3.1)	81.7	(1.1)	92.4	(0.8)	95.7	(0.8)
	New Zealand	56.1	(2.4)	62.0	(1.2)	71.9	(1.5)	77.9	(1.4)
	Norway	64.6	(1.9)	77.2	(1.0)	82.6	(1.8)	85.4	(2.8)
	Poland	82.9	(1.5)	89.5	(0.7)	91.4	(1.0)	93.5	(2.0)
	Portugal	82.1	(1.2)	89.4	(0.7)	90.3	(1.3)	86.6	(3.5)
	Slovak Republic	72.2	(1.8)	87.8	(1.0)	93.0	(1.1)	94.7	(1.8)
	Spain	75.8	(1.3)	88.1	(0.6)	92.0	(0.7)	91.5	(1.7)
	Sweden	54.0	(2.2)	67.0	(1.2)	71.0	(1.9)	77.4	(2.7)
	Switzerland	57.4	(1.9)	66.9	(1.0)	66.8	(1.5)	67.5	(2.0)
	Turkey	83.9	(1.1)	93.4	(0.8)	97.4	(1.3)	c	c
	United Kingdom	50.8	(1.5)	61.1	(1.0)	72.0	(1.3)	80.8	(1.7)
	United States	69.1	(1.4)	75.3	(0.9)	79.7	(1.4)	85.9	(2.0)
	OECD average	63.0	(0.4)	73.7	(0.2)	79.0	(0.3)	81.5	(0.4)
Partners	Argentina	75.4	(1.1)	81.6	(1.7)	80.1	(5.0)	c	c
	Azerbaijan	89.2	(0.7)	94.3	(0.9)	c	c	c	c
	Brazil	81.3	(0.8)	89.2	(0.9)	88.6	(2.6)	c	c
	Bulgaria	77.0	(1.2)	79.9	(1.1)	82.0	(1.9)	81.3	(3.6)
	Chile	88.7	(0.8)	93.6	(0.6)	96.3	(1.0)	c	c
	Colombia	86.3	(1.2)	90.4	(1.0)	c	c	c	c
	Croatia	76.4	(1.6)	84.4	(0.8)	89.8	(1.5)	89.0	(2.1)
	Estonia	65.6	(3.8)	70.8	(1.4)	79.6	(1.5)	85.0	(2.0)
	Hong Kong-China	85.8	(1.9)	93.9	(0.7)	94.4	(0.8)	94.4	(0.9)
	Indonesia	84.0	(0.7)	85.9	(1.1)	c	c	c	c
	Israel	66.0	(1.5)	73.4	(1.5)	78.2	(2.4)	79.6	(3.7)
	Jordan	83.5	(1.0)	89.8	(0.7)	91.5	(2.5)	c	c
	Kyrgyzstan	87.3	(0.5)	92.0	(1.2)	c	c	c	c
	Latvia	72.8	(2.6)	78.9	(1.2)	85.5	(1.5)	89.0	(2.6)
	Liechtenstein	56.2	(9.5)	66.8	(3.6)	56.0	(6.3)	51.2	(7.1)
	Lithuania	69.8	(1.7)	75.5	(1.1)	80.5	(1.7)	81.8	(3.3)
	Macao-China	87.7	(1.5)	93.5	(0.5)	94.3	(0.9)	94.5	(1.6)
	Montenegro	84.6	(0.8)	89.9	(0.8)	95.1	(2.4)	c	c
	Qatar	77.3	(0.7)	87.1	(1.2)	c	c	c	c
	Romania	76.1	(1.2)	85.4	(0.9)	92.1	(2.7)	c	c
	Russian Federation	75.1	(1.4)	80.6	(0.7)	82.6	(1.5)	84.3	(3.4)
	Serbia	80.0	(1.0)	84.9	(0.9)	88.2	(2.0)	c	c
	Slovenia	75.3	(2.3)	85.6	(0.8)	92.1	(0.9)	92.3	(1.5)
	Chinese Taipei	88.6	(1.4)	93.1	(0.5)	93.5	(0.7)	93.2	(0.9)
	Thailand	95.5	(0.5)	98.1	(0.3)	98.7	(1.2)	c	c
	Tunisia	87.3	(0.7)	91.6	(0.9)	c	c	c	c
	Uruguay	71.1	(1.6)	79.4	(1.1)	84.2	(2.0)	c	c



[Part 1/1]

Table A3.11a Personal value of science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.53	(0.03)	-0.17	(0.02)	0.26	(0.02)	0.68	(0.03)	**-0.42**	(0.04)
	Austria	-0.41	(0.06)	-0.48	(0.02)	-0.23	(0.05)	-0.02	(0.07)	**-0.21**	(0.10)
	Belgium	-0.38	(0.05)	-0.26	(0.02)	0.02	(0.02)	0.29	(0.03)	**-0.27**	(0.04)
	Canada	-0.20	(0.05)	0.01	(0.02)	0.36	(0.03)	0.75	(0.03)	**-0.39**	(0.04)
	Czech Republic	-0.17	(0.06)	-0.20	(0.03)	-0.14	(0.03)	0.07	(0.05)	**-0.21**	(0.06)
	Denmark	-0.40	(0.04)	-0.30	(0.02)	0.12	(0.04)	0.51	(0.09)	**-0.38**	(0.11)
	Finland	-0.57	(0.10)	-0.29	(0.02)	-0.02	(0.02)	0.29	(0.03)	**-0.31**	(0.04)
	France	-0.39	(0.06)	-0.28	(0.03)	0.15	(0.03)	0.52	(0.06)	**-0.37**	(0.07)
	Germany	-0.52	(0.06)	-0.33	(0.03)	-0.11	(0.03)	0.21	(0.06)	**-0.32**	(0.07)
	Greece	-0.26	(0.04)	-0.11	(0.02)	0.26	(0.04)	0.47	(0.08)	**-0.21**	(0.08)
	Hungary	-0.01	(0.06)	-0.03	(0.02)	0.04	(0.04)	0.28	(0.07)	**-0.24**	(0.08)
	Iceland	-0.63	(0.04)	-0.25	(0.03)	0.33	(0.05)	0.82	(0.09)	**-0.48**	(0.11)
	Ireland	-0.51	(0.05)	-0.12	(0.03)	0.34	(0.04)	0.71	(0.05)	**-0.37**	(0.06)
	Italy	0.07	(0.02)	0.13	(0.02)	0.29	(0.03)	0.45	(0.04)	**-0.16**	(0.05)
	Japan	-0.60	(0.05)	-0.32	(0.02)	-0.12	(0.03)	0.15	(0.05)	**-0.27**	(0.06)
	Korea	-0.46	(0.04)	-0.15	(0.02)	0.12	(0.03)	0.39	(0.08)	**-0.26**	(0.07)
	Luxembourg	-0.24	(0.04)	-0.17	(0.02)	0.11	(0.04)	0.44	(0.07)	**-0.33**	(0.07)
	Mexico	0.68	(0.02)	0.69	(0.01)	0.84	(0.06)	c	c	c	c
	Netherlands	-0.36	(0.04)	-0.33	(0.02)	-0.15	(0.03)	0.22	(0.04)	**-0.38**	(0.05)
	New Zealand	-0.33	(0.05)	-0.17	(0.03)	0.21	(0.04)	0.62	(0.04)	**-0.42**	(0.06)
	Norway	-0.44	(0.05)	-0.17	(0.03)	0.21	(0.05)	0.57	(0.06)	**-0.36**	(0.09)
	Poland	0.27	(0.03)	0.30	(0.02)	0.35	(0.03)	0.50	(0.06)	**-0.15**	(0.07)
	Portugal	0.30	(0.03)	0.45	(0.02)	0.72	(0.04)	1.02	(0.09)	**-0.30**	(0.09)
	Slovak Republic	0.00	(0.05)	-0.10	(0.03)	0.02	(0.04)	0.14	(0.07)	-0.12	(0.08)
	Spain	-0.19	(0.03)	-0.01	(0.02)	0.34	(0.03)	0.64	(0.06)	**-0.29**	(0.07)
	Sweden	-0.49	(0.06)	-0.19	(0.02)	0.17	(0.03)	0.55	(0.05)	**-0.38**	(0.06)
	Switzerland	-0.40	(0.04)	-0.34	(0.02)	-0.06	(0.03)	0.28	(0.04)	**-0.34**	(0.06)
	Turkey	0.10	(0.03)	0.39	(0.03)	0.96	(0.08)	c	c	c	c
	United Kingdom	-0.32	(0.03)	-0.10	(0.02)	0.23	(0.03)	0.62	(0.04)	**-0.39**	(0.05)
	United States	0.03	(0.04)	0.21	(0.02)	0.55	(0.04)	0.88	(0.06)	**-0.33**	(0.07)
	OECD average	-0.29	(0.01)	-0.14	(0.00)	0.16	(0.01)	0.47	(0.01)	**-0.31**	(0.01)
Partners	Argentina	0.39	(0.03)	0.29	(0.04)	0.37	(0.08)	c	c	c	c
	Azerbaijan	0.74	(0.02)	0.80	(0.04)	c	c	c	c	c	c
	Bulgaria	0.37	(0.03)	0.38	(0.03)	0.42	(0.05)	0.49	(0.09)	-0.07	(0.11)
	Brazil	0.50	(0.02)	0.45	(0.03)	0.52	(0.08)	c	c	c	c
	Chile	0.48	(0.03)	0.50	(0.03)	0.76	(0.06)	c	c	c	c
	Colombia	0.91	(0.02)	0.83	(0.03)	c	c	c	c	c	c
	Estonia	-0.02	(0.05)	0.04	(0.02)	0.23	(0.03)	0.51	(0.04)	**-0.28**	(0.06)
	Hong Kong-China	0.13	(0.05)	0.44	(0.02)	0.60	(0.03)	0.79	(0.04)	**-0.19**	(0.05)
	Croatia	0.20	(0.04)	0.15	(0.02)	0.24	(0.04)	0.42	(0.07)	**-0.18**	(0.08)
	Indonesia	0.53	(0.02)	0.48	(0.04)	c	c	c	c	c	c
	Israel	0.04	(0.04)	0.24	(0.03)	0.51	(0.05)	0.58	(0.10)	-0.08	(0.12)
	Jordan	0.62	(0.03)	0.80	(0.02)	1.06	(0.06)	c	c	c	c
	Kyrgyzstan	0.77	(0.02)	0.49	(0.04)	c	c	c	c	c	c
	Liechtenstein	-0.31	(0.16)	-0.35	(0.08)	-0.24	(0.13)	0.15	(0.20)	-0.38	(0.25)
	Lithuania	0.11	(0.03)	0.23	(0.02)	0.41	(0.04)	0.58	(0.07)	-0.17	(0.10)
	Latvia	0.08	(0.04)	0.09	(0.02)	0.24	(0.04)	0.39	(0.08)	-0.14	(0.09)
	Macao-China	0.25	(0.04)	0.31	(0.02)	0.40	(0.03)	0.53	(0.09)	-0.13	(0.10)
	Montenegro	0.55	(0.02)	0.41	(0.02)	0.49	(0.11)	c	c	c	c
	Qatar	0.42	(0.02)	0.77	(0.04)	c	c	c	c	c	c
	Romania	0.46	(0.03)	0.48	(0.02)	0.64	(0.07)	c	c	c	c
	Russian Federation	0.16	(0.03)	0.15	(0.02)	0.17	(0.03)	0.26	(0.06)	-0.09	(0.07)
	Serbia	0.38	(0.03)	0.22	(0.02)	0.22	(0.06)	c	c	c	c
	Slovenia	0.00	(0.06)	0.06	(0.02)	0.22	(0.04)	0.42	(0.06)	**-0.21**	(0.08)
	Chinese Taipei	0.39	(0.04)	0.55	(0.02)	0.66	(0.02)	0.80	(0.03)	**-0.14**	(0.04)
	Thailand	0.70	(0.02)	0.85	(0.02)	1.08	(0.07)	c	c	c	c
	Tunisia	0.60	(0.02)	0.89	(0.03)	c	c	c	c	c	c
	Uruguay	0.28	(0.04)	0.16	(0.03)	0.23	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/3]

Table A3.11b Personal value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Some concepts in science help me see how I relate to other people								I will use science in many ways when I am an adult							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	54.2	(1.7)	60.5	(0.9)	65.7	(1.5)	69.9	(1.4)	45.3	(1.5)	57.5	(0.8)	71.6	(1.1)	83.2	(1.3)
	Austria	61.0	(2.4)	52.3	(1.1)	48.0	(1.7)	44.3	(2.8)	47.2	(2.5)	44.1	(1.2)	50.3	(2.4)	57.6	(3.1)
	Belgium	56.3	(1.8)	49.0	(0.9)	46.0	(1.2)	47.6	(2.0)	52.4	(2.0)	56.7	(0.9)	69.0	(1.1)	80.6	(1.7)
	Canada	59.5	(2.1)	59.7	(0.8)	62.1	(1.2)	63.7	(1.5)	58.6	(1.6)	63.4	(0.9)	74.3	(1.1)	84.5	(1.1)
	Czech Republic	64.0	(2.0)	58.2	(1.2)	52.4	(2.0)	50.6	(3.4)	54.3	(2.8)	59.5	(1.6)	64.5	(2.2)	71.6	(2.5)
	Denmark	61.5	(1.9)	59.0	(1.1)	66.5	(2.1)	72.7	(3.4)	44.5	(2.0)	44.5	(1.2)	59.4	(2.4)	72.8	(3.6)
	Finland	56.7	(4.8)	63.9	(1.1)	67.5	(1.8)	69.8	(1.8)	41.0	(4.2)	47.6	(1.2)	61.3	(1.6)	72.2	(2.0)
	France	52.1	(2.1)	43.6	(1.4)	40.6	(1.9)	44.7	(3.0)	47.3	(2.1)	54.6	(1.4)	73.4	(1.5)	84.0	(2.1)
	Germany	60.0	(2.1)	56.8	(1.1)	49.2	(1.8)	46.8	(3.0)	45.8	(2.4)	48.3	(1.2)	55.0	(1.7)	67.6	(2.1)
	Greece	65.0	(2.2)	66.2	(1.2)	71.2	(2.1)	71.2	(5.7)	46.6	(1.7)	57.0	(1.1)	73.0	(2.2)	80.3	(5.0)
	Hungary	69.1	(2.1)	62.9	(1.1)	52.3	(2.4)	47.4	(3.1)	68.1	(2.4)	68.8	(1.2)	71.0	(2.2)	77.2	(2.9)
	Iceland	51.4	(2.0)	57.6	(1.3)	65.9	(2.3)	67.9	(4.5)	46.7	(2.1)	59.5	(1.2)	76.3	(2.0)	85.6	(3.4)
	Ireland	52.6	(2.2)	55.1	(1.1)	59.6	(1.6)	62.2	(2.7)	44.0	(2.3)	56.6	(1.1)	72.1	(1.7)	84.9	(2.3)
	Italy	61.8	(1.3)	52.3	(1.0)	49.9	(1.4)	51.9	(2.6)	63.1	(1.2)	71.2	(0.7)	79.7	(1.3)	83.9	(2.0)
	Japan	55.6	(2.2)	56.7	(1.0)	51.8	(1.4)	51.5	(1.9)	34.3	(2.5)	38.1	(1.2)	48.5	(1.5)	63.5	(1.9)
	Korea	59.9	(2.5)	53.9	(1.0)	50.6	(1.8)	50.1	(2.6)	59.6	(2.2)	72.7	(1.1)	83.4	(1.3)	89.6	(1.7)
	Luxembourg	62.9	(1.7)	57.9	(1.2)	55.3	(2.4)	57.9	(3.4)	51.7	(1.8)	55.5	(1.0)	65.0	(1.7)	75.3	(3.3)
	Mexico	82.3	(0.7)	77.2	(0.7)	73.8	(2.8)	c	c	81.1	(0.6)	86.2	(0.6)	91.7	(2.4)	c	c
	Netherlands	63.0	(3.7)	50.6	(1.6)	37.7	(1.7)	40.3	(2.1)	52.6	(2.9)	57.8	(1.4)	72.3	(1.6)	85.5	(2.5)
	New Zealand	61.1	(2.4)	57.7	(1.3)	62.3	(1.7)	67.3	(1.7)	54.0	(2.7)	57.9	(1.1)	70.0	(1.9)	81.5	(1.7)
	Norway	57.9	(2.3)	60.4	(1.3)	62.8	(2.8)	68.0	(4.1)	48.8	(2.1)	54.3	(1.2)	71.7	(2.2)	81.6	(2.9)
	Poland	74.3	(1.5)	72.6	(0.9)	67.5	(1.9)	65.4	(3.0)	80.9	(1.5)	84.0	(0.8)	86.7	(1.3)	90.6	(1.7)
	Portugal	79.0	(1.6)	78.4	(1.0)	76.7	(2.2)	79.7	(4.7)	72.7	(1.7)	81.0	(0.8)	90.2	(1.3)	96.9	(1.5)
	Slovak Republic	68.9	(3.4)	61.5	(1.2)	54.5	(1.9)	51.5	(3.3)	58.1	(2.1)	57.7	(1.4)	69.1	(2.0)	75.1	(2.7)
	Spain	67.2	(1.5)	61.9	(0.9)	59.5	(1.7)	61.5	(2.9)	54.3	(1.7)	66.2	(0.7)	80.0	(1.3)	87.6	(1.8)
	Sweden	59.8	(2.4)	68.3	(1.2)	69.0	(2.0)	71.9	(3.2)	45.9	(2.6)	55.4	(1.1)	69.2	(1.5)	82.5	(2.0)
	Switzerland	58.2	(2.0)	52.2	(1.0)	47.6	(1.2)	45.1	(2.1)	48.8	(1.9)	51.9	(0.9)	62.5	(1.4)	71.8	(1.8)
	Turkey	75.7	(1.3)	79.4	(1.2)	85.4	(2.6)	c	c	75.4	(1.1)	82.0	(1.0)	91.4	(2.0)	c	c
	United Kingdom	59.0	(1.8)	60.9	(1.1)	66.2	(1.5)	71.2	(1.6)	53.8	(1.9)	58.7	(1.2)	67.1	(1.3)	78.5	(1.6)
	United States	68.4	(1.5)	71.5	(1.0)	75.4	(1.9)	75.3	(2.4)	66.5	(1.6)	70.1	(1.1)	77.3	(1.7)	86.6	(2.0)
	OECD average	61.4	(0.4)	59.3	(0.2)	58.4	(0.4)	59.5	(0.6)	53.1	(0.4)	58.9	(0.2)	70.1	(0.3)	79.7	(0.5)
Partners	Argentina	73.5	(1.1)	64.1	(1.7)	60.6	(5.0)	c	c	77.6	(1.0)	78.0	(1.3)	81.5	(3.4)	c	c
	Azerbaijan	83.1	(0.9)	83.9	(1.4)	c	c	c	c	88.7	(0.8)	89.7	(1.0)	c	c	c	c
	Brazil	76.2	(0.9)	72.1	(1.4)	67.4	(3.5)	c	c	74.1	(1.3)	79.8	(1.2)	82.7	(3.0)	c	c
	Bulgaria	75.3	(1.4)	71.9	(1.4)	64.8	(2.5)	67.6	(4.7)	73.3	(1.2)	77.4	(1.1)	81.0	(2.4)	83.3	(3.7)
	Chile	83.4	(1.0)	78.1	(1.2)	75.2	(2.5)	c	c	73.2	(1.2)	77.2	(1.1)	86.9	(1.9)	c	c
	Colombia	78.9	(1.5)	77.3	(2.2)	c	c	c	c	88.1	(0.7)	87.7	(1.3)	c	c	c	c
	Croatia	79.7	(1.4)	72.9	(0.8)	66.0	(2.1)	65.1	(3.6)	62.1	(1.9)	70.7	(1.0)	79.1	(1.6)	85.3	(2.6)
	Estonia	69.5	(3.7)	74.8	(1.1)	81.0	(1.5)	82.8	(2.0)	63.4	(3.8)	59.9	(1.1)	68.9	(1.7)	79.4	(1.8)
	Hong Kong-China	75.9	(3.0)	79.7	(1.0)	77.0	(1.3)	75.3	(1.9)	63.2	(3.1)	74.8	(1.4)	77.1	(1.3)	80.7	(1.6)
	Indonesia	82.5	(0.7)	83.6	(1.0)	c	c	c	c	75.5	(0.9)	75.4	(1.1)	c	c	c	c
	Israel	62.9	(1.4)	60.9	(1.3)	57.6	(2.6)	54.2	(4.2)	60.2	(1.5)	68.4	(1.3)	78.3	(2.1)	82.1	(3.6)
	Jordan	83.6	(1.0)	86.2	(0.8)	83.4	(2.9)	c	c	83.5	(0.8)	89.3	(0.7)	95.0	(1.7)	c	c
	Kyrgyzstan	80.1	(0.7)	75.4	(1.6)	c	c	c	c	87.1	(0.6)	75.0	(2.2)	c	c	c	c
	Latvia	67.4	(2.8)	59.1	(1.2)	57.4	(2.6)	58.2	(5.5)	64.9	(2.8)	68.4	(1.2)	80.3	(2.0)	86.3	(3.2)
	Liechtenstein	60.6	(8.4)	50.4	(3.7)	43.4	(6.3)	42.7	(6.9)	55.5	(8.5)	50.4	(4.1)	49.4	(6.0)	64.5	(8.0)
	Lithuania	81.4	(1.6)	88.2	(0.8)	89.3	(1.2)	87.4	(3.0)	56.8	(2.1)	61.6	(1.1)	70.4	(2.2)	74.1	(3.8)
	Macao-China	72.7	(2.6)	65.0	(1.1)	59.4	(1.9)	58.4	(4.5)	67.9	(2.6)	71.4	(1.0)	77.5	(1.6)	79.6	(4.2)
	Montenegro	80.9	(1.0)	74.8	(1.2)	68.6	(4.8)	c	c	78.4	(1.0)	79.9	(1.0)	89.8	(2.9)	c	c
	Qatar	76.0	(0.7)	81.6	(1.5)	c	c	c	c	73.8	(0.6)	86.0	(1.3)	c	c	c	c
	Romania	84.5	(1.2)	77.4	(1.0)	71.4	(3.5)	c	c	75.5	(1.6)	75.6	(1.3)	84.2	(2.4)	c	c
	Russian Federation	75.6	(1.6)	74.1	(1.1)	71.8	(2.0)	73.4	(3.9)	62.9	(2.2)	59.4	(1.0)	58.0	(1.8)	61.7	(3.1)
	Serbia	69.2	(1.4)	50.2	(1.2)	34.0	(3.3)	c	c	82.8	(1.0)	83.0	(0.9)	86.7	(2.5)	c	c
	Slovenia	74.7	(1.9)	73.2	(0.9)	67.0	(1.9)	61.1	(2.5)	62.5	(2.4)	70.3	(1.2)	78.1	(1.5)	87.6	(1.7)
	Chinese Taipei	79.8	(1.8)	70.8	(0.9)	63.6	(1.2)	65.4	(1.5)	78.1	(1.4)	80.0	(0.8)	84.5	(0.8)	88.6	(0.9)
	Thailand	89.3	(0.8)	93.3	(0.6)	94.9	(2.1)	c	c	90.2	(0.7)	94.5	(0.5)	98.3	(1.0)	c	c
	Tunisia	77.4	(0.9)	78.7	(1.5)	c	c	c	c	64.5	(1.0)	80.5	(1.6)	c	c	c	c
	Uruguay	76.5	(1.6)	71.4	(1.1)	65.8	(3.0)	c	c	71.4	(1.4)	68.1	(1.2)	69.4	(2.7)	c	c



[Part 2/3]

Table A3.11b Personal value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		Science is very relevant to me								I find that science helps me to understand the things around me							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	34.6	(1.5)	47.1	(0.8)	65.8	(1.0)	81.2	(1.2)	58.1	(1.6)	69.1	(0.9)	82.1	(1.1)	91.7	(0.8)
	Austria	43.6	(2.3)	38.6	(1.1)	48.5	(2.2)	57.7	(2.9)	57.1	(3.0)	58.8	(1.1)	72.7	(1.5)	82.4	(2.4)
	Belgium	43.2	(2.1)	46.9	(1.0)	61.2	(1.3)	72.9	(1.8)	62.0	(2.7)	69.7	(1.0)	79.3	(1.0)	87.3	(1.3)
	Canada	47.4	(1.8)	56.2	(1.0)	71.6	(1.4)	85.0	(1.2)	63.1	(2.2)	73.2	(0.9)	83.5	(1.0)	90.2	(1.0)
	Czech Republic	52.9	(2.8)	49.3	(1.3)	52.1	(2.1)	59.9	(3.1)	67.5	(2.5)	66.2	(1.3)	70.5	(1.9)	82.2	(1.7)
	Denmark	43.5	(2.1)	46.6	(1.2)	62.7	(2.1)	74.9	(3.3)	58.5	(2.1)	64.0	(1.1)	80.8	(1.7)	90.9	(2.1)
	Finland	37.7	(4.6)	39.6	(1.1)	50.3	(1.5)	62.4	(2.0)	55.5	(5.2)	68.6	(1.2)	79.1	(1.1)	88.1	(1.4)
	France	40.1	(2.0)	49.0	(1.4)	69.9	(1.6)	84.2	(2.1)	63.9	(2.3)	71.3	(1.4)	84.2	(1.6)	92.6	(1.4)
	Germany	41.5	(2.4)	43.2	(1.2)	52.9	(2.0)	65.2	(3.1)	55.4	(2.5)	65.5	(1.1)	77.9	(1.3)	87.9	(1.8)
	Greece	38.3	(1.9)	40.8	(1.0)	61.3	(2.4)	75.4	(4.1)	67.1	(1.7)	80.2	(0.9)	91.8	(1.5)	94.8	(2.6)
	Hungary	57.9	(2.8)	56.6	(1.5)	60.2	(2.1)	71.3	(3.1)	68.6	(2.5)	74.0	(1.0)	80.9	(1.8)	90.2	(2.6)
	Iceland	33.1	(1.8)	42.7	(1.3)	67.1	(2.3)	81.9	(2.8)	48.7	(2.0)	65.4	(1.1)	85.0	(1.8)	93.7	(1.8)
	Ireland	34.8	(2.2)	50.5	(1.3)	70.2	(1.6)	84.6	(2.4)	59.0	(2.3)	72.3	(1.2)	86.2	(1.2)	93.7	(1.5)
	Italy	70.4	(1.1)	75.7	(0.8)	83.3	(1.2)	87.8	(1.7)	81.8	(1.0)	86.7	(0.4)	90.9	(1.0)	95.0	(1.1)
	Japan	42.5	(2.6)	57.2	(1.1)	67.9	(1.7)	75.6	(2.1)	51.6	(2.0)	64.1	(1.2)	72.7	(1.9)	79.3	(2.5)
	Korea	28.7	(2.0)	42.8	(1.2)	63.0	(1.8)	77.5	(2.7)	56.0	(2.1)	70.2	(0.9)	80.2	(1.3)	87.2	(1.9)
	Luxembourg	50.8	(1.9)	50.1	(1.2)	59.4	(2.1)	74.2	(3.1)	64.8	(1.8)	70.1	(1.1)	80.9	(1.7)	88.3	(2.7)
	Mexico	88.0	(0.8)	86.1	(0.6)	86.4	(2.7)	c	c	90.0	(0.6)	92.8	(0.4)	94.2	(1.9)	c	c
	Netherlands	36.3	(2.5)	39.0	(1.2)	52.1	(1.7)	67.6	(2.3)	58.8	(2.6)	62.4	(1.4)	69.4	(1.8)	79.6	(1.8)
	New Zealand	40.4	(2.5)	46.6	(1.3)	64.9	(1.7)	79.2	(1.8)	67.1	(2.2)	71.5	(1.1)	81.8	(1.1)	90.3	(1.1)
	Norway	44.2	(1.9)	48.9	(1.2)	65.8	(2.1)	78.3	(2.7)	54.3	(1.8)	66.1	(1.1)	79.7	(1.9)	90.0	(2.2)
	Poland	71.4	(1.9)	69.9	(0.9)	71.7	(1.7)	74.9	(3.2)	80.0	(1.4)	81.6	(0.9)	83.3	(1.7)	88.1	(1.8)
	Portugal	75.4	(1.7)	79.1	(0.8)	88.1	(1.6)	96.4	(1.9)	87.6	(1.3)	93.4	(0.6)	95.4	(1.0)	97.3	(1.7)
	Slovak Republic	63.8	(2.3)	61.7	(1.2)	66.2	(1.8)	72.0	(2.9)	70.9	(1.7)	67.3	(1.4)	75.2	(1.8)	76.6	(2.9)
	Spain	49.2	(1.8)	55.4	(0.8)	72.6	(1.6)	81.6	(2.2)	68.1	(1.3)	78.4	(0.6)	86.3	(1.0)	91.8	(1.6)
	Sweden	35.5	(2.1)	40.6	(1.4)	53.2	(1.8)	71.6	(2.7)	49.3	(2.4)	66.3	(1.0)	82.8	(1.5)	93.8	(2.0)
	Switzerland	44.5	(1.8)	43.1	(1.0)	54.7	(1.5)	70.9	(1.9)	58.2	(1.9)	66.5	(1.0)	79.5	(1.4)	89.6	(1.4)
	Turkey	59.6	(1.6)	67.6	(1.2)	85.3	(2.3)	c	c	75.4	(1.4)	84.3	(0.9)	94.7	(1.3)	c	c
	United Kingdom	40.2	(1.9)	49.6	(1.2)	64.7	(1.7)	78.5	(1.7)	65.3	(1.7)	74.8	(0.9)	86.3	(1.0)	92.3	(1.0)
	United States	56.6	(1.7)	62.7	(1.1)	78.2	(2.0)	87.4	(2.2)	74.1	(1.4)	79.1	(0.9)	86.8	(1.5)	91.2	(1.7)
	OECD average	46.4	(0.4)	51.0	(0.2)	64.3	(0.3)	76.1	(0.5)	63.3	(0.4)	71.3	(0.2)	81.6	(0.3)	89.1	(0.4)
Partners	Argentina	73.9	(1.2)	68.7	(1.7)	69.7	(3.8)	c	c	82.1	(1.0)	83.7	(1.3)	88.5	(2.7)	c	c
	Azerbaijan	89.6	(0.8)	91.0	(1.1)	c	c	c	c	85.2	(0.8)	87.4	(1.2)	c	c	c	c
	Brazil	79.6	(1.1)	74.1	(1.4)	77.7	(3.6)	c	c	88.4	(0.7)	89.0	(1.0)	93.1	(1.8)	c	c
	Bulgaria	78.1	(1.2)	75.9	(1.1)	74.5	(2.7)	78.6	(5.8)	85.5	(1.1)	89.3	(0.8)	91.3	(1.5)	91.9	(3.0)
	Chile	72.0	(1.3)	71.2	(1.2)	79.9	(2.1)	c	c	84.8	(1.1)	87.5	(0.9)	91.9	(1.4)	c	c
	Colombia	96.6	(0.5)	95.2	(0.7)	c	c	c	c	95.5	(0.5)	96.6	(0.7)	c	c	c	c
	Croatia	69.7	(1.9)	63.9	(1.2)	67.0	(1.8)	74.9	(3.3)	82.4	(1.7)	83.7	(0.9)	87.3	(1.2)	89.1	(2.7)
	Estonia	56.6	(3.3)	54.0	(1.1)	59.9	(1.8)	69.7	(2.5)	70.8	(3.4)	79.6	(1.0)	85.3	(1.4)	93.4	(1.7)
	Hong Kong-China	81.1	(2.1)	92.5	(0.7)	94.7	(0.8)	96.3	(0.7)	77.1	(2.3)	87.0	(0.7)	91.4	(0.8)	95.9	(0.9)
	Indonesia	81.6	(0.9)	78.4	(2.4)	c	c	c	c	91.6	(0.4)	93.1	(0.7)	c	c	c	c
	Israel	60.9	(1.4)	66.5	(1.3)	77.2	(2.2)	82.1	(3.7)	72.0	(1.2)	82.1	(1.0)	89.1	(1.6)	92.0	(2.3)
	Jordan	75.5	(1.0)	78.2	(1.2)	86.5	(2.4)	c	c	88.3	(0.9)	94.7	(0.6)	97.8	(0.9)	c	c
	Kyrgyzstan	88.3	(0.6)	82.9	(1.9)	c	c	c	c	85.9	(0.6)	89.0	(1.4)	c	c	c	c
	Latvia	66.8	(1.8)	71.1	(1.1)	78.4	(1.7)	81.5	(3.7)	82.5	(1.9)	84.9	(0.9)	91.4	(1.2)	92.3	(2.4)
	Liechtenstein	39.6	(8.7)	42.4	(3.6)	47.4	(6.5)	60.3	(7.4)	64.8	(7.6)	62.7	(3.6)	77.5	(5.0)	85.2	(6.4)
	Lithuania	63.2	(1.6)	63.6	(1.2)	70.2	(1.9)	76.1	(4.3)	79.2	(1.7)	86.9	(0.9)	91.9	(1.3)	94.7	(2.3)
	Macao-China	82.1	(1.7)	90.5	(0.6)	94.2	(1.1)	93.8	(2.3)	83.5	(2.5)	89.4	(0.8)	93.6	(1.1)	93.8	(2.6)
	Montenegro	78.7	(1.1)	74.2	(1.2)	78.0	(4.3)	c	c	83.8	(0.9)	81.3	(1.0)	83.0	(4.2)	c	c
	Qatar	66.3	(0.7)	75.3	(1.7)	c	c	c	c	82.1	(0.6)	93.6	(1.1)	c	c	c	c
	Romania	72.0	(1.5)	79.0	(1.6)	85.3	(3.1)	c	c	87.9	(0.9)	91.7	(0.7)	94.0	(2.2)	c	c
	Russian Federation	68.5	(1.9)	68.1	(1.2)	70.7	(2.1)	74.5	(3.4)	77.7	(1.7)	82.4	(0.9)	86.8	(1.3)	90.2	(2.3)
	Serbia	72.3	(1.4)	64.5	(1.3)	68.4	(2.5)	c	c	82.9	(1.1)	86.4	(0.8)	90.9	(1.8)	c	c
	Slovenia	56.4	(2.9)	57.9	(1.3)	62.9	(2.1)	71.8	(2.4)	76.0	(2.3)	77.2	(1.1)	84.0	(1.3)	85.9	(1.7)
	Chinese Taipei	78.7	(1.9)	88.8	(0.6)	93.6	(0.7)	95.9	(0.6)	85.4	(1.7)	89.1	(0.6)	91.6	(0.7)	93.6	(0.8)
	Thailand	87.0	(0.7)	87.9	(0.6)	90.8	(1.9)	c	c	95.3	(0.5)	96.7	(0.4)	97.9	(1.0)	c	c
	Tunisia	86.2	(0.8)	93.5	(0.8)	c	c	c	c	87.4	(0.7)	94.3	(0.9)	c	c	c	c
	Uruguay	72.8	(1.5)	63.8	(1.4)	66.9	(3.2)	c	c	82.2	(1.3)	84.7	(1.0)	88.5	(1.8)	c	c



[Part 3/3]

Table A3.11b Personal value of science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements							
		When I leave school there will be many opportunities for me to use science							
		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	40.8	(1.5)	54.0	(0.7)	69.9	(1.0)	82.4	(1.3)
	Austria	35.2	(2.4)	35.8	(1.2)	44.6	(2.1)	51.9	(3.4)
	Belgium	45.6	(2.0)	52.3	(0.9)	66.6	(1.1)	78.4	(1.5)
	Canada	56.1	(1.9)	63.9	(0.8)	75.0	(1.1)	85.8	(1.0)
	Czech Republic	49.2	(2.7)	50.2	(1.5)	56.4	(2.1)	64.6	(2.8)
	Denmark	45.9	(2.2)	48.2	(1.1)	65.9	(2.0)	74.9	(3.5)
	Finland	40.4	(4.2)	49.2	(1.2)	63.5	(1.6)	75.2	(1.9)
	France	51.3	(2.1)	55.0	(1.4)	68.8	(1.5)	79.7	(2.4)
	Germany	35.1	(2.3)	39.6	(1.3)	47.7	(1.9)	60.8	(2.5)
	Greece	48.1	(2.1)	50.6	(1.0)	61.1	(2.2)	66.6	(4.1)
	Hungary	56.6	(2.5)	52.4	(1.3)	55.0	(2.2)	65.0	(3.2)
	Iceland	37.0	(1.6)	46.8	(1.3)	66.7	(2.0)	82.0	(4.0)
	Ireland	44.9	(2.4)	58.6	(1.3)	75.5	(1.9)	87.6	(1.8)
	Italy	61.5	(1.3)	64.2	(1.0)	68.5	(1.6)	69.4	(3.1)
	Japan	41.2	(1.9)	44.9	(1.1)	49.4	(1.6)	58.5	(2.6)
	Korea	42.9	(2.4)	53.5	(1.2)	61.5	(1.7)	68.4	(3.6)
	Luxembourg	45.7	(1.7)	46.1	(1.0)	58.9	(1.8)	67.5	(3.1)
	Mexico	84.8	(0.8)	87.9	(0.6)	90.6	(2.0)	c	c
	Netherlands	51.8	(3.0)	50.5	(1.2)	63.4	(1.6)	79.9	(2.2)
	New Zealand	53.9	(2.4)	57.4	(1.1)	71.2	(1.8)	83.9	(1.9)
	Norway	47.3	(2.3)	56.3	(1.3)	73.4	(1.9)	87.2	(2.7)
	Poland	74.0	(1.7)	71.6	(0.9)	71.1	(1.4)	78.5	(3.1)
	Portugal	69.3	(1.8)	74.1	(1.1)	86.5	(1.7)	93.8	(2.8)
	Slovak Republic	55.4	(2.6)	54.6	(1.6)	62.5	(2.2)	68.3	(3.5)
	Spain	47.8	(2.2)	57.2	(0.9)	75.6	(1.4)	85.4	(2.0)
	Sweden	49.7	(2.5)	57.4	(1.2)	70.2	(1.6)	84.3	(2.8)
	Switzerland	39.6	(1.9)	41.5	(1.0)	54.5	(1.4)	66.6	(1.8)
	Turkey	51.9	(1.6)	58.5	(1.6)	82.4	(2.6)	c	c
	United Kingdom	50.2	(1.7)	56.3	(1.1)	69.1	(1.8)	80.6	(1.7)
	United States	65.2	(1.7)	69.8	(1.3)	78.7	(1.5)	87.3	(2.3)
	OECD average	49.3	(0.4)	54.0	(0.2)	65.4	(0.3)	75.5	(0.5)
Partners	Argentina	78.5	(1.1)	77.3	(1.5)	80.8	(3.5)	c	c
	Azerbaijan	75.3	(1.0)	76.2	(1.5)	c	c	c	c
	Brazil	75.3	(0.9)	74.4	(1.3)	79.7	(4.1)	c	c
	Bulgaria	72.2	(1.4)	70.3	(1.4)	73.3	(2.5)	68.7	(4.8)
	Chile	78.6	(1.2)	78.0	(1.2)	87.5	(2.8)	c	c
	Colombia	84.1	(1.1)	81.5	(1.4)	c	c	c	c
	Croatia	63.7	(2.2)	66.6	(1.3)	71.9	(2.0)	80.8	(3.1)
	Estonia	55.7	(3.7)	55.5	(1.1)	63.7	(1.9)	73.3	(2.4)
	Hong Kong-China	57.7	(3.1)	63.2	(1.4)	65.9	(1.5)	71.4	(1.6)
	Indonesia	85.0	(0.8)	83.7	(1.4)	c	c	c	c
	Israel	55.8	(1.4)	64.8	(1.5)	76.7	(2.4)	81.9	(3.0)
	Jordan	78.8	(1.1)	84.4	(1.0)	90.3	(2.3)	c	c
	Kyrgyzstan	85.0	(0.7)	75.4	(2.4)	c	c	c	c
	Latvia	60.3	(2.9)	61.6	(1.4)	66.5	(2.6)	69.6	(3.8)
	Liechtenstein	41.8	(8.1)	36.6	(4.0)	42.0	(6.7)	59.9	(10.3)
	Lithuania	60.0	(1.5)	66.1	(1.2)	74.8	(1.9)	78.0	(3.5)
	Macao-China	60.6	(3.0)	61.9	(1.1)	64.6	(2.0)	70.9	(4.7)
	Montenegro	82.8	(1.0)	78.7	(1.2)	84.0	(3.6)	c	c
	Qatar	70.7	(0.7)	79.9	(1.5)	c	c	c	c
	Romania	79.0	(1.3)	83.8	(1.3)	87.6	(3.2)	c	c
	Russian Federation	68.5	(1.8)	64.6	(1.0)	63.7	(2.0)	66.5	(3.7)
	Serbia	74.0	(1.3)	69.7	(1.1)	70.7	(3.9)	c	c
	Slovenia	55.0	(2.8)	59.6	(1.0)	65.9	(2.2)	76.2	(3.1)
	Chinese Taipei	69.2	(2.3)	70.7	(0.9)	74.1	(1.1)	80.0	(1.5)
	Thailand	88.8	(0.7)	89.9	(0.7)	94.8	(1.9)	c	c
	Tunisia	77.3	(1.0)	83.2	(1.0)	c	c	c	c
	Uruguay	68.2	(1.6)	62.6	(1.4)	66.2	(2.7)	c	c



[Part 1/1]

Table A3.12a Future-oriented motivation to learn science (mean index), by performance group

		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.43	(0.03)	-0.28	(0.02)	0.13	(0.02)	0.54	(0.03)	**-0.41**	(0.03)
	Austria	-0.45	(0.06)	-0.48	(0.02)	-0.15	(0.05)	0.18	(0.07)	**-0.33**	(0.09)
	Belgium	-0.26	(0.04)	-0.21	(0.02)	0.19	(0.03)	0.62	(0.04)	**-0.43**	(0.05)
	Canada	-0.18	(0.04)	0.00	(0.02)	0.36	(0.02)	0.79	(0.03)	**-0.44**	(0.04)
	Switzerland	-0.34	(0.04)	-0.40	(0.02)	-0.06	(0.04)	0.46	(0.05)	**-0.52**	(0.07)
	Czech Republic	-0.14	(0.05)	-0.18	(0.03)	-0.09	(0.04)	0.16	(0.05)	**-0.25**	(0.05)
	Germany	-0.36	(0.05)	-0.30	(0.03)	-0.01	(0.04)	0.38	(0.06)	**-0.38**	(0.09)
	Denmark	-0.33	(0.04)	-0.31	(0.02)	0.10	(0.05)	0.51	(0.09)	**-0.40**	(0.12)
	Spain	-0.19	(0.03)	-0.04	(0.01)	0.50	(0.03)	0.95	(0.05)	**-0.45**	(0.05)
	Finland	-0.50	(0.08)	-0.42	(0.02)	-0.11	(0.03)	0.29	(0.04)	**-0.39**	(0.05)
	France	-0.29	(0.04)	-0.21	(0.03)	0.28	(0.04)	0.83	(0.06)	**-0.54**	(0.08)
	United Kingdom	-0.36	(0.04)	-0.29	(0.02)	0.04	(0.04)	0.49	(0.04)	**-0.45**	(0.05)
	Greece	0.11	(0.04)	0.06	(0.02)	0.43	(0.05)	0.81	(0.12)	**-0.38**	(0.13)
	Hungary	0.16	(0.06)	-0.04	(0.03)	0.17	(0.04)	0.56	(0.09)	**-0.39**	(0.09)
	Ireland	-0.41	(0.04)	-0.19	(0.02)	0.24	(0.04)	0.64	(0.06)	**-0.39**	(0.08)
	Iceland	-0.38	(0.04)	-0.13	(0.03)	0.39	(0.04)	0.81	(0.08)	**-0.42**	(0.09)
	Italy	0.14	(0.02)	0.13	(0.02)	0.39	(0.03)	0.69	(0.06)	**-0.30**	(0.06)
	Japan	-0.58	(0.05)	-0.42	(0.03)	-0.10	(0.03)	0.32	(0.04)	**-0.42**	(0.05)
	Korea	-0.42	(0.04)	-0.43	(0.02)	-0.05	(0.04)	0.33	(0.10)	**-0.38**	(0.08)
	Luxembourg	-0.18	(0.04)	-0.13	(0.02)	0.15	(0.04)	0.55	(0.08)	**-0.39**	(0.09)
	Mexico	0.69	(0.03)	0.49	(0.02)	0.66	(0.06)	c	c	c	c
	Netherlands	-0.33	(0.07)	-0.43	(0.02)	-0.15	(0.03)	0.36	(0.05)	**-0.52**	(0.07)
	Norway	-0.32	(0.04)	-0.35	(0.02)	0.05	(0.04)	0.43	(0.07)	**-0.38**	(0.08)
	New Zealand	-0.20	(0.04)	-0.24	(0.03)	0.14	(0.04)	0.56	(0.04)	**-0.41**	(0.05)
	Poland	0.23	(0.04)	0.08	(0.02)	0.21	(0.03)	0.44	(0.06)	**-0.22**	(0.07)
	Portugal	-0.01	(0.03)	0.21	(0.03)	0.73	(0.05)	1.16	(0.10)	**-0.43**	(0.11)
	Slovak Republic	0.10	(0.04)	0.02	(0.03)	0.18	(0.05)	0.34	(0.08)	-0.16	(0.11)
	Sweden	-0.45	(0.04)	-0.34	(0.02)	0.03	(0.03)	0.51	(0.05)	**-0.48**	(0.06)
	Turkey	0.56	(0.03)	0.66	(0.03)	1.14	(0.09)	c	c	c	c
	United States	0.11	(0.04)	0.09	(0.02)	0.37	(0.04)	0.68	(0.06)	**-0.31**	(0.07)
	OECD average	-0.22	(0.01)	-0.19	(0.00)	0.16	(0.01)	0.55	(0.01)	**-0.39**	(0.01)
Partners	Argentina	0.36	(0.04)	0.23	(0.03)	0.43	(0.11)	c	c	c	c
	Azerbaijan	0.72	(0.03)	0.61	(0.04)	c	c	c	c	c	c
	Brazil	0.51	(0.02)	0.37	(0.03)	0.47	(0.10)	c	c	c	c
	Bulgaria	0.50	(0.04)	0.27	(0.03)	0.36	(0.06)	0.47	(0.12)	-0.11	(0.13)
	Chile	0.17	(0.03)	0.22	(0.03)	0.56	(0.08)	c	c	c	c
	Colombia	0.79	(0.03)	0.66	(0.04)	c	c	c	c	c	c
	Croatia	0.22	(0.04)	0.16	(0.02)	0.31	(0.04)	0.52	(0.08)	**-0.21**	(0.08)
	Estonia	0.01	(0.06)	-0.17	(0.02)	-0.07	(0.03)	0.17	(0.04)	**-0.23**	(0.05)
	Hong Kong-China	0.05	(0.05)	0.13	(0.02)	0.38	(0.04)	0.70	(0.03)	**-0.32**	(0.05)
	Indonesia	0.85	(0.02)	0.74	(0.05)	c	c	c	c	c	c
	Israel	0.19	(0.04)	0.23	(0.04)	0.60	(0.06)	0.86	(0.07)	**-0.25**	(0.09)
	Jordan	0.97	(0.02)	1.10	(0.02)	1.46	(0.06)	c	c	c	c
	Kyrgyzstan	1.11	(0.02)	0.56	(0.04)	c	c	c	c	c	c
	Latvia	-0.03	(0.04)	-0.15	(0.02)	0.00	(0.05)	0.23	(0.08)	**-0.23**	(0.09)
	Liechtenstein	-0.27	(0.17)	-0.45	(0.07)	-0.26	(0.11)	0.22	(0.20)	**-0.47**	(0.26)
	Lithuania	0.14	(0.03)	0.06	(0.02)	0.24	(0.04)	0.46	(0.07)	**-0.22**	(0.07)
	Macao-China	0.21	(0.04)	0.09	(0.02)	0.26	(0.03)	0.51	(0.07)	**-0.25**	(0.08)
	Montenegro	0.46	(0.03)	0.18	(0.03)	0.30	(0.13)	c	c	c	c
	Qatar	0.56	(0.01)	0.72	(0.04)	c	c	c	c	c	c
	Romania	0.62	(0.03)	0.47	(0.03)	0.57	(0.07)	c	c	c	c
	Russian Federation	0.49	(0.04)	0.28	(0.02)	0.26	(0.04)	0.40	(0.07)	-0.14	(0.08)
	Serbia	0.38	(0.03)	0.19	(0.03)	0.45	(0.07)	c	c	c	c
	Slovenia	-0.17	(0.04)	-0.10	(0.02)	0.10	(0.04)	0.46	(0.06)	**-0.35**	(0.08)
	Chinese Taipei	0.02	(0.05)	-0.02	(0.02)	0.25	(0.02)	0.50	(0.04)	**-0.25**	(0.04)
	Thailand	0.87	(0.02)	0.82	(0.02)	1.09	(0.09)	c	c	c	c
	Tunisia	1.00	(0.02)	1.17	(0.03)	c	c	c	c	c	c
	Uruguay	0.17	(0.04)	0.09	(0.02)	0.29	(0.07)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/3]

Table A3.12b Future-oriented motivation to learn science (mean index) by performance group, by gender

		Females									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.50	(0.04)	-0.31	(0.02)	0.09	(0.03)	0.50	(0.05)	**-0.40**	(0.05)
	Austria	-0.48	(0.08)	-0.48	(0.03)	-0.21	(0.07)	0.07	(0.10)	**-0.29**	(0.12)
	Belgium	-0.31	(0.04)	-0.25	(0.03)	0.05	(0.03)	0.42	(0.06)	**-0.36**	(0.07)
	Canada	-0.15	(0.06)	0.01	(0.03)	0.34	(0.04)	0.75	(0.05)	**-0.41**	(0.06)
	Czech Republic	-0.13	(0.06)	-0.06	(0.04)	0.05	(0.06)	0.33	(0.06)	**-0.28**	(0.07)
	Denmark	-0.34	(0.05)	-0.27	(0.03)	0.21	(0.07)	0.67	(0.16)	**-0.45**	(0.19)
	Finland	-0.52	(0.11)	-0.36	(0.03)	-0.04	(0.03)	0.31	(0.05)	**-0.35**	(0.06)
	France	-0.34	(0.06)	-0.24	(0.03)	0.15	(0.05)	0.62	(0.07)	**-0.47**	(0.09)
	Germany	-0.52	(0.06)	-0.36	(0.03)	-0.10	(0.05)	0.21	(0.09)	**-0.31**	(0.10)
	Greece	-0.11	(0.05)	-0.10	(0.03)	0.32	(0.08)	0.60	(0.18)	-0.28	(0.24)
	Hungary	0.09	(0.06)	-0.01	(0.03)	0.25	(0.05)	0.53	(0.10)	**-0.28**	(0.12)
	Iceland	-0.60	(0.05)	-0.28	(0.03)	0.25	(0.06)	0.74	(0.12)	**-0.48**	(0.12)
	Ireland	-0.45	(0.07)	-0.12	(0.04)	0.31	(0.07)	0.70	(0.08)	**-0.40**	(0.10)
	Italy	0.03	(0.03)	0.05	(0.02)	0.28	(0.04)	0.52	(0.08)	**-0.23**	(0.08)
	Japan	-0.82	(0.06)	-0.62	(0.03)	-0.30	(0.04)	0.11	(0.06)	**-0.41**	(0.07)
	Korea	-0.54	(0.06)	-0.56	(0.02)	-0.18	(0.05)	0.11	(0.10)	**-0.29**	(0.09)
	Luxembourg	-0.22	(0.05)	-0.08	(0.03)	0.14	(0.07)	0.34	(0.12)	-0.20	(0.14)
	Mexico	0.64	(0.03)	0.44	(0.02)	0.73	(0.10)	c	c	c	c
	Netherlands	-0.42	(0.09)	-0.54	(0.03)	-0.28	(0.05)	0.15	(0.08)	**-0.44**	(0.10)
	New Zealand	-0.23	(0.06)	-0.26	(0.04)	0.12	(0.05)	0.55	(0.06)	**-0.43**	(0.07)
	Norway	-0.40	(0.06)	-0.42	(0.03)	-0.02	(0.06)	0.30	(0.10)	**-0.32**	(0.12)
	Poland	0.16	(0.04)	0.16	(0.03)	0.35	(0.05)	0.61	(0.10)	**-0.25**	(0.10)
	Portugal	-0.06	(0.04)	0.21	(0.03)	0.78	(0.06)	1.13	(0.16)	**-0.35**	(0.16)
	Slovak Republic	0.08	(0.07)	0.11	(0.04)	0.27	(0.06)	0.30	(0.11)	-0.03	(0.12)
	Spain	-0.31	(0.04)	-0.07	(0.03)	0.49	(0.05)	0.90	(0.09)	**-0.41**	(0.11)
	Sweden	-0.42	(0.06)	-0.36	(0.03)	-0.02	(0.05)	0.36	(0.08)	**-0.39**	(0.09)
	Switzerland	-0.43	(0.05)	-0.41	(0.03)	-0.10	(0.05)	0.31	(0.08)	**-0.41**	(0.11)
	Turkey	0.48	(0.05)	0.59	(0.03)	1.16	(0.11)	c	c	c	c
	United Kingdom	-0.44	(0.05)	-0.33	(0.03)	-0.04	(0.05)	0.39	(0.06)	**-0.43**	(0.08)
	United States	0.03	(0.05)	0.05	(0.03)	0.32	(0.06)	0.55	(0.09)	**-0.24**	(0.11)
	OECD average	-0.30	(0.01)	-0.21	(0.01)	0.12	(0.01)	0.47	(0.02)	**-0.34**	(0.02)
Partners	Argentina	0.34	(0.05)	0.26	(0.05)	0.41	(0.16)	c	c	c	c
	Azerbaijan	0.69	(0.03)	0.66	(0.05)	c	c	c	c	c	c
	Brazil	0.48	(0.02)	0.35	(0.03)	0.48	(0.15)	c	c	c	c
	Bulgaria	0.54	(0.05)	0.34	(0.04)	0.44	(0.09)	0.55	(0.16)	-0.10	(0.18)
	Chile	0.12	(0.04)	0.27	(0.04)	0.62	(0.12)	c	c	c	c
	Colombia	0.75	(0.04)	0.70	(0.05)	c	c	c	c	c	c
	Croatia	0.23	(0.04)	0.18	(0.03)	0.33	(0.05)	0.49	(0.13)	-0.16	(0.13)
	Estonia	-0.06	(0.09)	-0.15	(0.03)	0.01	(0.04)	0.20	(0.06)	**-0.19**	(0.07)
	Hong Kong-China	-0.17	(0.08)	-0.03	(0.04)	0.24	(0.05)	0.56	(0.06)	**-0.32**	(0.09)
	Indonesia	0.86	(0.02)	0.83	(0.04)	c	c	c	c	c	c
	Israel	0.04	(0.05)	0.20	(0.05)	0.55	(0.09)	0.81	(0.13)	-0.25	(0.18)
	Jordan	0.88	(0.03)	1.02	(0.03)	1.41	(0.08)	c	c	c	c
	Kyrgyzstan	1.13	(0.02)	0.53	(0.05)	c	c	c	c	c	c
	Latvia	-0.11	(0.05)	-0.14	(0.03)	0.05	(0.05)	0.21	(0.13)	-0.16	(0.14)
	Liechtenstein	-0.31	(0.19)	-0.55	(0.10)	-0.25	(0.14)	-0.03	(0.25)	-0.23	(0.31)
	Lithuania	0.13	(0.04)	0.10	(0.03)	0.30	(0.05)	0.48	(0.10)	-0.17	(0.12)
	Macao-China	0.04	(0.05)	0.01	(0.02)	0.17	(0.05)	0.44	(0.10)	**-0.27**	(0.11)
	Montenegro	0.50	(0.03)	0.17	(0.04)	0.11	(0.18)	c	c	c	c
	Qatar	0.33	(0.02)	0.68	(0.04)	c	c	c	c	c	c
	Romania	0.62	(0.05)	0.48	(0.04)	0.38	(0.12)	c	c	c	c
	Russian Federation	0.46	(0.05)	0.25	(0.03)	0.18	(0.05)	0.34	(0.12)	-0.15	(0.11)
	Serbia	0.34	(0.04)	0.12	(0.04)	0.40	(0.10)	c	c	c	c
	Slovenia	-0.14	(0.06)	-0.06	(0.03)	0.10	(0.05)	0.36	(0.09)	**-0.26**	(0.11)
	Chinese Taipei	-0.18	(0.06)	-0.26	(0.02)	-0.08	(0.03)	0.16	(0.05)	**-0.24**	(0.06)
	Thailand	0.86	(0.02)	0.86	(0.03)	1.08	(0.11)	c	c	c	c
	Tunisia	0.95	(0.03)	1.17	(0.03)	c	c	c	c	c	c
	Uruguay	0.26	(0.04)	0.14	(0.03)	0.28	(0.10)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 2/3]

Table A3.12b Future-oriented motivation to learn science (mean index) by performance group, by gender

		Males									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.38	(0.04)	-0.24	(0.02)	0.17	(0.04)	0.58	(0.04)	**-0.41**	(0.06)
	Austria	-0.43	(0.06)	-0.48	(0.03)	-0.08	(0.06)	0.27	(0.09)	**-0.35**	(0.11)
	Belgium	-0.21	(0.06)	-0.18	(0.03)	0.30	(0.04)	0.76	(0.05)	**-0.46**	(0.06)
	Canada	-0.20	(0.05)	-0.01	(0.03)	0.37	(0.03)	0.83	(0.05)	**-0.46**	(0.06)
	Czech Republic	-0.16	(0.07)	-0.28	(0.04)	-0.21	(0.04)	0.04	(0.05)	**-0.24**	(0.07)
	Denmark	-0.32	(0.06)	-0.35	(0.03)	0.01	(0.06)	0.38	(0.13)	**-0.37**	(0.16)
	Finland	-0.48	(0.12)	-0.48	(0.04)	-0.18	(0.04)	0.27	(0.05)	**-0.45**	(0.07)
	France	-0.23	(0.05)	-0.17	(0.04)	0.42	(0.07)	0.97	(0.09)	**-0.55**	(0.13)
	Germany	-0.18	(0.08)	-0.24	(0.04)	0.07	(0.06)	0.49	(0.09)	**-0.41**	(0.12)
	Greece	0.27	(0.05)	0.25	(0.03)	0.54	(0.07)	0.95	(0.16)	**-0.41**	(0.17)
	Hungary	0.22	(0.09)	-0.07	(0.04)	0.10	(0.05)	0.58	(0.11)	**-0.48**	(0.11)
	Iceland	-0.19	(0.05)	0.02	(0.04)	0.52	(0.06)	0.88	(0.11)	**-0.36**	(0.12)
	Ireland	-0.39	(0.07)	-0.26	(0.03)	0.18	(0.06)	0.58	(0.08)	**-0.40**	(0.11)
	Italy	0.25	(0.04)	0.21	(0.02)	0.49	(0.04)	0.82	(0.07)	**-0.33**	(0.07)
	Japan	-0.37	(0.05)	-0.20	(0.04)	0.12	(0.05)	0.48	(0.05)	**-0.36**	(0.08)
	Korea	-0.32	(0.05)	-0.29	(0.03)	0.07	(0.05)	0.51	(0.12)	**-0.44**	(0.11)
	Luxembourg	-0.13	(0.05)	-0.18	(0.04)	0.16	(0.06)	0.67	(0.10)	**-0.50**	(0.12)
	Mexico	0.75	(0.04)	0.55	(0.03)	0.61	(0.08)	c	c	c	c
	Netherlands	-0.23	(0.09)	-0.33	(0.03)	-0.02	(0.05)	0.51	(0.06)	**-0.53**	(0.08)
	New Zealand	-0.19	(0.06)	-0.22	(0.03)	0.17	(0.04)	0.56	(0.05)	**-0.39**	(0.07)
	Norway	-0.25	(0.06)	-0.28	(0.03)	0.12	(0.06)	0.54	(0.11)	**-0.41**	(0.13)
	Poland	0.29	(0.05)	0.00	(0.03)	0.07	(0.06)	0.32	(0.07)	**-0.25**	(0.11)
	Portugal	0.04	(0.05)	0.22	(0.04)	0.69	(0.07)	1.18	(0.11)	**-0.49**	(0.12)
	Slovak Republic	0.11	(0.05)	-0.07	(0.04)	0.11	(0.08)	0.37	(0.12)	-0.26	(0.16)
	Spain	-0.07	(0.05)	-0.01	(0.03)	0.51	(0.04)	0.99	(0.07)	**-0.47**	(0.08)
	Sweden	-0.48	(0.05)	-0.32	(0.03)	0.08	(0.05)	0.63	(0.08)	**-0.55**	(0.10)
	Switzerland	-0.25	(0.06)	-0.38	(0.02)	-0.02	(0.05)	0.59	(0.06)	**-0.61**	(0.08)
	Turkey	0.61	(0.04)	0.73	(0.05)	1.12	(0.11)	c	c	c	c
	United Kingdom	-0.27	(0.05)	-0.24	(0.03)	0.13	(0.05)	0.57	(0.05)	**-0.44**	(0.08)
	United States	0.19	(0.05)	0.13	(0.03)	0.42	(0.05)	0.79	(0.08)	**-0.37**	(0.09)
	OECD average	-0.15	(0.01)	-0.16	(0.01)	0.19	(0.01)	0.61	(0.02)	**-0.42**	(0.02)
Partners	Argentina	0.39	(0.05)	0.19	(0.05)	0.47	(0.17)	c	c	c	c
	Azerbaijan	0.74	(0.03)	0.56	(0.04)	c	c	c	c	c	c
	Brazil	0.55	(0.03)	0.39	(0.04)	0.46	(0.13)	c	c	c	c
	Bulgaria	0.46	(0.05)	0.19	(0.04)	0.27	(0.06)	0.42	(0.11)	-0.15	(0.15)
	Chile	0.22	(0.04)	0.17	(0.03)	0.52	(0.10)	c	c	c	c
	Colombia	0.85	(0.04)	0.60	(0.05)	c	c	c	c	c	c
	Croatia	0.20	(0.05)	0.14	(0.03)	0.30	(0.05)	0.55	(0.10)	**-0.25**	(0.11)
	Estonia	0.07	(0.09)	-0.19	(0.02)	-0.14	(0.05)	0.14	(0.06)	**-0.28**	(0.08)
	Hong Kong-China	0.26	(0.08)	0.31	(0.03)	0.53	(0.04)	0.83	(0.05)	**-0.30**	(0.06)
	Indonesia	0.84	(0.02)	0.68	(0.07)	c	c	c	c	c	c
	Israel	0.34	(0.05)	0.25	(0.05)	0.65	(0.07)	0.89	(0.11)	-0.24	(0.13)
	Jordan	1.04	(0.03)	1.20	(0.03)	1.53	(0.09)	c	c	c	c
	Kyrgyzstan	1.09	(0.02)	0.59	(0.06)	c	c	c	c	c	c
	Latvia	0.04	(0.05)	-0.16	(0.03)	-0.05	(0.07)	0.25	(0.11)	**-0.30**	(0.12)
	Liechtenstein	-0.23	(0.28)	-0.34	(0.10)	-0.27	(0.20)	0.50	(0.29)	**-0.77**	(0.38)
	Lithuania	0.15	(0.05)	0.01	(0.03)	0.17	(0.07)	0.44	(0.09)	**-0.27**	(0.13)
	Macao-China	0.34	(0.06)	0.19	(0.02)	0.35	(0.05)	0.56	(0.09)	-0.21	(0.12)
	Montenegro	0.42	(0.04)	0.19	(0.04)	0.49	(0.17)	c	c	c	c
	Qatar	0.77	(0.02)	0.79	(0.06)	c	c	c	c	c	c
	Romania	0.62	(0.03)	0.46	(0.03)	0.72	(0.09)	c	c	c	c
	Russian Federation	0.52	(0.05)	0.31	(0.03)	0.33	(0.05)	0.44	(0.10)	-0.11	(0.12)
	Serbia	0.40	(0.04)	0.26	(0.03)	0.51	(0.09)	c	c	c	c
	Slovenia	-0.20	(0.06)	-0.15	(0.03)	0.11	(0.06)	0.56	(0.08)	**-0.45**	(0.12)
	Chinese Taipei	0.19	(0.05)	0.22	(0.03)	0.53	(0.03)	0.77	(0.04)	**-0.24**	(0.06)
	Thailand	0.88	(0.02)	0.77	(0.03)	1.09	(0.10)	c	c	c	c
	Tunisia	1.05	(0.03)	1.17	(0.04)	c	c	c	c	c	c
	Uruguay	0.08	(0.06)	0.02	(0.04)	0.29	(0.08)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 3/3]

Table A3.12b Future-oriented motivation to learn science (mean index) by performance group, by gender

		Females – Males							
		Difference in the mean index between female lowest performers and male lowest performers		Difference in the mean index between female moderate performers and male moderate performers		Difference in the mean index between female strong performers and male strong performers		Difference in the mean index between female top performers and male top performers	
		Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	**-0.12**	(0.06)	**-0.07**	(0.03)	-0.08	(0.05)	-0.08	(0.06)
	Austria	-0.05	(0.08)	0.00	(0.04)	-0.13	(0.08)	-0.19	(0.13)
	Belgium	-0.10	(0.07)	-0.07	(0.04)	**-0.25**	(0.05)	**-0.35**	(0.08)
	Canada	0.05	(0.08)	0.02	(0.04)	-0.03	(0.06)	-0.08	(0.07)
	Czech Republic	0.02	(0.09)	**0.22**	(0.05)	**0.26**	(0.07)	**0.30**	(0.08)
	Denmark	-0.01	(0.08)	**0.09**	(0.04)	**0.20**	(0.10)	0.29	(0.23)
	Finland	-0.04	(0.17)	**0.12**	(0.04)	**0.15**	(0.05)	0.05	(0.06)
	France	-0.11	(0.07)	-0.07	(0.04)	**-0.27**	(0.08)	**-0.35**	(0.11)
	Germany	**-0.34**	(0.11)	**-0.12**	(0.04)	**-0.17**	(0.07)	**-0.28**	(0.12)
	Greece	**-0.38**	(0.08)	**-0.35**	(0.05)	**-0.22**	(0.11)	-0.35	(0.26)
	Hungary	-0.12	(0.09)	0.06	(0.05)	**0.16**	(0.06)	-0.05	(0.12)
	Iceland	**-0.41**	(0.07)	**-0.29**	(0.05)	**-0.27**	(0.09)	-0.14	(0.16)
	Ireland	-0.06	(0.11)	**0.13**	(0.06)	0.13	(0.10)	0.12	(0.10)
	Italy	**-0.22**	(0.05)	**-0.15**	(0.03)	**-0.21**	(0.06)	**-0.31**	(0.09)
	Japan	**-0.45**	(0.09)	**-0.42**	(0.04)	**-0.42**	(0.06)	**-0.37**	(0.08)
	Korea	**-0.22**	(0.07)	**-0.27**	(0.03)	**-0.24**	(0.06)	**-0.40**	(0.11)
	Luxembourg	-0.09	(0.07)	0.09	(0.05)	-0.02	(0.10)	**-0.33**	(0.15)
	Mexico	**-0.11**	(0.04)	**-0.11**	(0.03)	0.13	(0.13)	c	c
	Netherlands	-0.19	(0.11)	**-0.21**	(0.04)	**-0.26**	(0.07)	**-0.36**	(0.10)
	New Zealand	-0.04	(0.09)	-0.04	(0.05)	-0.05	(0.06)	-0.01	(0.08)
	Norway	-0.15	(0.08)	**-0.14**	(0.04)	-0.15	(0.10)	-0.24	(0.17)
	Poland	**-0.13**	(0.06)	**0.16**	(0.04)	**0.28**	(0.09)	**0.28**	(0.12)
	Portugal	-0.09	(0.05)	-0.01	(0.04)	0.09	(0.08)	-0.06	(0.17)
	Slovak Republic	-0.03	(0.08)	**0.18**	(0.05)	0.16	(0.10)	-0.07	(0.16)
	Spain	**-0.24**	(0.06)	-0.06	(0.04)	-0.02	(0.07)	-0.08	(0.13)
	Sweden	0.06	(0.08)	-0.04	(0.04)	-0.11	(0.07)	**-0.27**	(0.11)
	Switzerland	**-0.18**	(0.05)	-0.03	(0.04)	-0.08	(0.07)	**-0.29**	(0.10)
	Turkey	**-0.13**	(0.06)	**-0.13**	(0.05)	0.04	(0.13)	c	c
	United Kingdom	**-0.17**	(0.07)	**-0.09**	(0.04)	**-0.17**	(0.06)	**-0.18**	(0.08)
	United States	**-0.17**	(0.06)	**-0.08**	(0.04)	-0.11	(0.09)	**-0.24**	(0.12)
	OECD average	**-0.14**	(0.02)	**-0.05**	(0.01)	**-0.07**	(0.01)	**-0.14**	(0.02)
Partners	Argentina	-0.05	(0.05)	0.07	(0.07)	-0.05	(0.25)	c	c
	Azerbaijan	-0.05	(0.03)	0.10	(0.06)	c	c	c	c
	Brazil	**-0.07**	(0.03)	-0.04	(0.04)	0.02	(0.18)	c	c
	Bulgaria	0.08	(0.05)	**0.16**	(0.05)	0.17	(0.10)	0.13	(0.14)
	Chile	-0.09	(0.05)	**0.10**	(0.05)	0.10	(0.16)	c	c
	Colombia	-0.10	(0.06)	0.10	(0.07)	c	c	c	c
	Croatia	0.04	(0.06)	0.04	(0.03)	0.03	(0.07)	-0.06	(0.17)
	Estonia	-0.13	(0.13)	0.04	(0.04)	**0.15**	(0.06)	0.06	(0.09)
	Hong Kong-China	**-0.43**	(0.12)	**-0.34**	(0.05)	**-0.29**	(0.05)	**-0.27**	(0.08)
	Indonesia	0.02	(0.03)	**0.15**	(0.08)	c	c	c	c
	Israel	**-0.30**	(0.07)	-0.05	(0.06)	-0.10	(0.12)	-0.08	(0.19)
	Jordan	**-0.16**	(0.04)	**-0.18**	(0.05)	-0.12	(0.13)	c	c
	Kyrgyzstan	0.04	(0.02)	-0.06	(0.08)	c	c	c	c
	Latvia	-0.15	(0.08)	0.02	(0.04)	0.10	(0.08)	-0.03	(0.16)
	Liechtenstein	-0.08	(0.31)	-0.21	(0.14)	0.02	(0.25)	-0.53	(0.35)
	Lithuania	-0.02	(0.07)	**0.10**	(0.04)	0.13	(0.09)	0.03	(0.15)
	Macao-China	**-0.31**	(0.08)	**-0.18**	(0.03)	**-0.18**	(0.07)	-0.12	(0.14)
	Montenegro	0.07	(0.05)	-0.02	(0.05)	-0.37	(0.25)	c	c
	Qatar	**-0.43**	(0.03)	-0.11	(0.07)	c	c	c	c
	Romania	-0.01	(0.06)	0.02	(0.04)	**-0.34**	(0.17)	c	c
	Russian Federation	-0.06	(0.07)	-0.06	(0.03)	**-0.15**	(0.06)	-0.11	(0.16)
	Serbia	-0.06	(0.05)	**-0.13**	(0.04)	-0.11	(0.12)	c	c
	Slovenia	0.05	(0.08)	**0.09**	(0.04)	-0.02	(0.08)	-0.20	(0.13)
	Chinese Taipei	**-0.37**	(0.07)	**-0.47**	(0.03)	**-0.61**	(0.04)	**-0.60**	(0.07)
	Thailand	-0.02	(0.03)	**0.09**	(0.03)	-0.01	(0.13)	c	c
	Tunisia	**-0.10**	(0.03)	0.00	(0.04)	c	c	c	c
	Uruguay	**0.18**	(0.06)	**0.12**	(0.05)	-0.01	(0.13)	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/2]

Table A3.12c Future-oriented motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I would like to work in a career involving science								I would like to study science after secondary school							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	21.7	(1.5)	30.8	(0.8)	49.1	(1.2)	65.2	(1.2)	18.2	(1.4)	25.1	(0.8)	42.5	(1.2)	60.2	(1.3)
	Austria	19.6	(2.0)	21.4	(1.0)	34.6	(2.3)	47.3	(3.2)	14.9	(2.4)	11.7	(0.8)	24.3	(2.1)	35.6	(2.9)
	Belgium	28.5	(1.5)	29.1	(0.9)	48.8	(1.5)	67.7	(1.9)	18.7	(1.7)	18.7	(0.9)	36.9	(1.5)	56.6	(1.8)
	Canada	31.2	(1.9)	40.4	(1.0)	54.6	(1.3)	71.1	(1.6)	27.8	(1.8)	37.6	(1.1)	53.9	(1.4)	70.1	(1.7)
	Czech Republic	24.1	(2.4)	21.7	(1.3)	26.4	(1.8)	38.7	(2.7)	15.7	(2.0)	12.7	(0.9)	18.9	(1.6)	33.9	(2.4)
	Denmark	23.1	(1.7)	23.3	(0.9)	41.3	(1.9)	55.2	(3.9)	14.5	(1.6)	16.0	(0.9)	31.2	(1.9)	45.5	(3.6)
	Finland	15.8	(3.3)	15.9	(0.9)	27.8	(1.5)	46.9	(1.9)	8.9	(2.4)	10.8	(0.8)	24.1	(1.4)	46.6	(2.2)
	France	30.6	(1.9)	36.3	(1.2)	58.1	(1.7)	77.0	(2.1)	21.9	(2.0)	25.9	(1.2)	49.4	(1.5)	73.2	(3.0)
	Germany	25.5	(2.1)	27.4	(1.1)	40.6	(1.7)	57.1	(2.6)	17.0	(1.6)	18.1	(1.0)	29.7	(1.7)	46.2	(2.8)
	Greece	37.1	(2.2)	36.8	(1.0)	54.5	(2.3)	69.1	(4.9)	27.8	(1.9)	29.5	(1.1)	47.8	(2.3)	64.9	(4.9)
	Hungary	42.5	(3.5)	33.1	(1.4)	43.9	(2.1)	57.5	(3.4)	28.4	(3.1)	22.4	(1.4)	34.4	(2.5)	55.4	(3.8)
	Iceland	22.2	(2.0)	32.6	(1.4)	55.5	(2.1)	73.1	(3.5)	20.0	(1.9)	29.5	(1.3)	53.9	(2.4)	70.6	(3.9)
	Ireland	22.2	(2.0)	35.4	(1.0)	56.5	(1.8)	70.8	(2.7)	18.6	(1.6)	29.6	(1.0)	50.1	(1.7)	66.0	(2.9)
	Italy	42.7	(1.3)	44.1	(1.0)	60.1	(1.4)	70.4	(2.1)	30.6	(1.3)	30.6	(0.9)	42.5	(1.6)	57.3	(2.6)
	Japan	14.6	(1.5)	16.7	(1.1)	27.1	(1.5)	43.1	(2.1)	9.3	(1.5)	13.1	(0.9)	25.1	(1.3)	42.0	(1.8)
	Korea	15.7	(1.9)	19.5	(1.0)	37.9	(2.0)	53.8	(4.0)	12.3	(1.7)	14.2	(0.8)	33.1	(1.9)	50.6	(4.1)
	Luxembourg	30.9	(1.6)	32.0	(1.0)	45.6	(1.9)	58.4	(3.5)	26.3	(1.7)	26.8	(0.9)	38.8	(1.9)	53.4	(3.6)
	Mexico	67.2	(1.3)	59.7	(0.9)	68.3	(2.6)	c	c	54.2	(1.4)	43.3	(1.0)	54.7	(2.6)	c	c
	Netherlands	19.4	(2.8)	13.9	(0.9)	30.3	(1.8)	51.8	(2.9)	17.0	(2.6)	10.9	(0.8)	24.9	(2.0)	47.9	(3.0)
	New Zealand	27.6	(2.3)	32.4	(1.2)	50.3	(1.7)	67.4	(1.7)	23.0	(2.3)	24.9	(1.2)	41.3	(2.1)	59.3	(2.2)
	Norway	26.6	(1.6)	24.5	(0.9)	40.0	(2.2)	54.6	(3.7)	19.4	(1.6)	17.3	(0.8)	32.3	(2.0)	49.4	(3.4)
	Poland	34.4	(1.8)	31.4	(1.1)	40.0	(1.7)	47.7	(3.1)	33.4	(1.6)	28.8	(1.0)	37.9	(1.8)	47.1	(2.8)
	Portugal	32.3	(1.8)	49.5	(1.3)	72.8	(2.5)	86.0	(3.1)	23.1	(1.6)	36.9	(1.3)	61.7	(2.3)	77.4	(3.2)
	Slovak Republic	27.6	(2.7)	27.3	(1.2)	37.7	(2.5)	44.7	(3.1)	22.3	(2.9)	21.3	(1.2)	32.0	(2.0)	40.5	(2.8)
	Spain	27.3	(1.4)	36.2	(0.8)	60.3	(1.7)	77.0	(2.2)	24.8	(1.5)	33.6	(0.8)	60.6	(1.7)	77.2	(2.1)
	Sweden	19.1	(1.9)	24.9	(1.1)	41.0	(1.7)	62.4	(2.8)	15.0	(1.6)	20.1	(1.0)	37.3	(1.8)	59.4	(3.1)
	Switzerland	24.9	(1.7)	26.5	(0.9)	41.8	(1.6)	61.3	(2.2)	18.8	(1.8)	14.2	(0.8)	25.5	(1.6)	46.0	(2.2)
	Turkey	59.8	(1.6)	60.1	(1.3)	80.6	(3.1)	c	c	51.4	(1.4)	54.5	(1.4)	74.0	(3.8)	c	c
	United Kingdom	22.2	(1.7)	27.4	(1.0)	42.3	(1.8)	60.4	(1.7)	20.9	(1.6)	24.3	(1.0)	42.7	(1.7)	61.6	(2.0)
	United States	40.0	(2.2)	40.2	(1.2)	53.7	(2.3)	67.0	(3.1)	36.5	(1.8)	38.7	(1.1)	57.6	(1.9)	73.0	(2.5)
	OECD average	26.8	(0.4)	29.7	(0.2)	45.4	(0.4)	60.8	(0.5)	20.9	(0.4)	23.0	(0.2)	38.9	(0.3)	56.0	(0.6)
Partners	Argentina	51.1	(2.0)	48.0	(1.9)	58.0	(6.1)	c	c	42.9	(1.9)	39.2	(1.7)	52.2	(5.6)	c	c
	Azerbaijan	60.4	(1.4)	56.9	(2.2)	c	c	c	c	56.5	(1.4)	55.0	(2.0)	c	c	c	c
	Brazil	51.8	(1.1)	49.0	(1.4)	61.1	(4.7)	c	c	54.6	(1.2)	46.5	(1.4)	53.3	(5.1)	c	c
	Bulgaria	50.7	(2.0)	41.8	(1.7)	47.5	(3.3)	54.7	(7.1)	49.7	(2.0)	43.3	(1.5)	49.0	(3.2)	57.3	(6.4)
	Chile	38.9	(1.4)	46.9	(1.3)	65.6	(3.2)	c	c	32.8	(1.2)	37.7	(1.2)	56.2	(3.7)	c	c
	Colombia	68.5	(1.2)	62.3	(1.4)	c	c	c	c	55.8	(1.4)	46.1	(1.8)	c	c	c	c
	Croatia	41.7	(2.1)	38.8	(1.2)	46.5	(1.9)	53.0	(3.8)	26.3	(1.9)	22.4	(1.0)	32.9	(2.0)	44.7	(4.3)
	Estonia	30.6	(3.1)	22.3	(1.1)	26.0	(1.6)	37.6	(2.5)	28.6	(3.0)	19.8	(0.9)	21.8	(1.4)	32.4	(2.3)
	Hong Kong-China	36.7	(3.5)	37.9	(1.1)	51.4	(1.6)	65.2	(1.6)	28.7	(2.8)	31.3	(1.2)	47.1	(1.9)	61.8	(1.6)
	Indonesia	75.6	(1.3)	70.0	(3.0)	c	c	c	c	62.4	(1.0)	60.3	(2.1)	c	c	c	c
	Israel	44.9	(1.6)	42.6	(1.5)	58.1	(2.3)	67.1	(3.4)	40.1	(1.6)	41.5	(1.4)	56.2	(2.8)	69.3	(3.2)
	Jordan	75.9	(1.1)	78.2	(1.1)	89.0	(2.2)	c	c	70.2	(1.3)	73.7	(1.2)	84.6	(2.7)	c	c
	Kyrgyzstan	81.7	(0.7)	54.0	(2.4)	c	c	c	c	77.2	(0.8)	53.4	(2.3)	c	c	c	c
	Latvia	22.7	(1.8)	20.3	(1.1)	29.1	(2.2)	38.2	(4.7)	22.1	(1.8)	19.1	(1.2)	29.0	(2.2)	37.6	(4.9)
	Liechtenstein	26.2	(6.5)	17.0	(2.8)	27.5	(4.6)	51.3	(8.4)	17.8	(6.6)	10.5	(2.6)	18.7	(4.4)	39.3	(8.8)
	Lithuania	37.7	(1.7)	30.6	(1.0)	41.6	(2.4)	53.2	(3.0)	27.1	(1.7)	23.2	(1.0)	34.2	(2.2)	45.6	(3.6)
	Macao-China	48.4	(3.0)	37.5	(1.0)	47.8	(2.5)	61.7	(4.9)	34.1	(2.3)	28.6	(1.0)	41.3	(2.5)	54.0	(4.5)
	Montenegro	52.5	(1.2)	41.2	(1.4)	51.7	(6.2)	c	c	47.1	(1.2)	34.5	(1.3)	44.9	(5.2)	c	c
	Qatar	62.4	(0.7)	67.4	(1.7)	c	c	c	c	52.0	(0.7)	58.8	(1.6)	c	c	c	c
	Romania	61.9	(1.8)	52.5	(1.6)	55.8	(4.4)	c	c	57.1	(1.8)	49.4	(2.7)	52.7	(5.1)	c	c
	Russian Federation	48.7	(2.3)	38.6	(1.3)	39.4	(2.1)	46.3	(3.6)	50.6	(2.3)	40.9	(1.3)	43.5	(2.6)	50.8	(4.4)
	Serbia	53.9	(1.4)	47.1	(1.4)	61.1	(3.2)	c	c	36.1	(1.5)	27.8	(1.2)	43.1	(3.6)	c	c
	Slovenia	32.3	(2.6)	33.9	(1.2)	44.8	(2.0)	57.7	(3.0)	16.9	(1.7)	16.5	(0.9)	26.8	(1.9)	42.3	(2.8)
	Chinese Taipei	30.6	(2.4)	29.2	(1.2)	45.1	(1.3)	58.3	(1.9)	25.5	(2.5)	24.7	(1.1)	41.1	(1.3)	55.1	(2.1)
	Thailand	70.8	(1.4)	69.2	(1.3)	82.8	(3.1)	c	c	71.7	(1.2)	68.7	(1.3)	80.9	(3.8)	c	c
	Tunisia	81.8	(0.9)	84.7	(1.1)	c	c	c	c	75.0	(1.1)	81.2	(1.5)	c	c	c	c
	Uruguay	44.8	(2.2)	42.6	(1.5)	52.8	(3.7)	c	c	34.3	(1.8)	32.2	(1.1)	40.2	(2.9)	c	c

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[Part 2/2]

Table A3.12c Future-oriented motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		I would like to spend my life doing advanced science								I would like to work on science projects as an adult							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	10.7	(0.9)	9.2	(0.5)	19.3	(0.8)	33.0	(1.2)	13.7	(1.1)	15.3	(0.6)	27.4	(1.1)	41.8	(1.4)
	Austria	17.2	(2.1)	12.2	(0.9)	21.3	(1.7)	31.0	(2.7)	19.3	(2.0)	18.0	(0.9)	26.7	(1.8)	39.3	(3.1)
	Belgium	14.9	(1.3)	13.6	(0.7)	26.6	(1.3)	43.9	(2.0)	19.1	(1.8)	18.8	(0.8)	33.2	(1.2)	51.5	(2.0)
	Canada	16.5	(1.7)	19.0	(0.8)	29.8	(1.2)	45.2	(1.7)	21.1	(1.8)	22.5	(0.7)	34.4	(1.2)	52.4	(1.6)
	Czech Republic	20.1	(2.0)	16.9	(1.0)	19.4	(1.5)	27.7	(2.1)	18.9	(2.5)	18.7	(1.1)	22.6	(1.7)	32.9	(2.1)
	Denmark	9.8	(1.2)	10.7	(0.8)	26.4	(1.9)	40.6	(4.1)	14.4	(1.3)	16.8	(1.0)	34.8	(1.9)	48.1	(3.7)
	Finland	10.4	(2.3)	6.5	(0.7)	10.9	(0.9)	24.0	(1.5)	7.6	(2.4)	11.8	(0.9)	21.9	(1.5)	40.2	(1.9)
	France	13.1	(1.6)	11.1	(0.8)	22.2	(1.6)	42.5	(3.9)	19.7	(1.6)	20.1	(1.0)	37.2	(1.9)	58.1	(3.3)
	Germany	18.0	(2.1)	16.2	(0.9)	23.1	(1.7)	35.2	(2.3)	19.0	(1.9)	19.6	(1.0)	29.7	(1.5)	40.9	(2.5)
	Greece	30.1	(2.1)	26.6	(1.0)	42.7	(2.3)	62.8	(4.6)	28.4	(1.8)	27.4	(0.9)	39.4	(2.4)	55.8	(4.8)
	Hungary	27.8	(2.9)	14.2	(1.0)	19.2	(1.8)	33.9	(3.3)	27.9	(3.2)	19.7	(1.1)	32.7	(2.3)	49.9	(3.6)
	Iceland	13.9	(1.5)	13.7	(1.0)	27.7	(2.0)	42.5	(4.1)	15.4	(1.6)	24.2	(1.4)	44.5	(2.8)	64.6	(4.6)
	Ireland	9.5	(1.7)	10.3	(0.7)	20.3	(1.7)	33.9	(2.9)	12.4	(1.7)	17.2	(0.8)	31.0	(1.8)	44.6	(3.2)
	Italy	25.2	(1.2)	20.8	(0.8)	30.8	(1.6)	45.5	(2.8)	28.9	(1.3)	27.2	(0.9)	39.5	(1.7)	54.9	(2.6)
	Japan	12.3	(1.8)	17.7	(1.1)	27.4	(1.6)	41.2	(2.2)	8.7	(1.5)	10.5	(0.8)	20.3	(1.4)	34.3	(1.9)
	Korea	9.3	(1.5)	7.1	(0.6)	15.8	(1.3)	27.9	(4.4)	11.6	(1.7)	10.6	(0.7)	23.0	(1.8)	37.9	(4.4)
	Luxembourg	21.5	(1.3)	20.3	(0.8)	27.6	(1.9)	41.3	(3.4)	25.3	(1.6)	25.2	(0.9)	33.5	(1.9)	46.0	(3.4)
	Mexico	48.3	(1.3)	35.9	(0.9)	40.1	(3.4)	c	c	57.2	(1.4)	48.9	(1.0)	59.0	(2.6)	c	c
	Netherlands	17.3	(3.3)	7.5	(0.8)	13.7	(1.8)	32.1	(2.4)	14.2	(2.4)	11.8	(1.0)	21.2	(1.4)	40.5	(2.2)
	New Zealand	12.1	(2.0)	9.9	(1.1)	19.7	(1.6)	32.8	(1.9)	19.2	(1.9)	14.7	(1.1)	25.9	(1.5)	41.0	(1.8)
	Norway	18.7	(1.5)	10.7	(0.7)	16.7	(1.6)	27.7	(3.4)	20.8	(1.5)	18.1	(0.8)	31.3	(1.8)	45.8	(3.1)
	Poland	31.1	(1.9)	24.1	(0.9)	28.3	(1.5)	38.2	(3.2)	37.0	(1.9)	30.5	(1.0)	36.7	(1.6)	45.9	(2.7)
	Portugal	22.0	(1.6)	25.8	(1.1)	43.9	(2.4)	61.6	(4.4)	21.6	(1.6)	27.8	(1.2)	49.2	(2.6)	63.9	(4.8)
	Slovak Republic	25.2	(2.4)	24.8	(1.2)	34.3	(2.6)	40.9	(3.0)	25.3	(2.1)	23.7	(1.2)	32.0	(2.3)	37.8	(3.1)
	Spain	17.1	(1.2)	18.8	(0.8)	34.9	(1.5)	53.1	(2.5)	20.3	(1.2)	21.7	(0.6)	39.0	(1.4)	57.2	(2.2)
	Sweden	10.6	(1.4)	9.1	(0.9)	17.6	(1.4)	31.6	(2.8)	12.5	(1.7)	15.9	(1.0)	27.9	(1.7)	47.3	(2.6)
	Switzerland	16.6	(1.7)	11.5	(0.7)	19.9	(1.2)	38.7	(2.0)	20.5	(1.8)	16.0	(0.8)	25.6	(1.4)	45.5	(2.1)
	Turkey	48.5	(1.8)	47.8	(1.5)	63.8	(4.2)	c	c	54.4	(1.6)	58.0	(1.4)	72.4	(3.3)	c	c
	United Kingdom	10.6	(1.4)	7.5	(0.7)	16.5	(1.4)	31.3	(1.6)	12.8	(1.1)	13.0	(0.7)	23.8	(1.5)	39.3	(2.0)
	United States	24.7	(1.6)	18.4	(0.9)	27.6	(1.8)	40.8	(2.7)	31.7	(1.8)	25.4	(1.2)	33.7	(2.0)	47.6	(2.9)
	OECD average	17.4	(0.3)	14.8	(0.2)	24.4	(0.3)	38.6	(0.6)	19.6	(0.3)	19.4	(0.2)	31.4	(0.3)	46.6	(0.6)
Partners	Argentina	33.2	(1.7)	25.3	(1.3)	31.5	(5.1)	c	c	46.4	(1.8)	41.4	(1.5)	49.2	(5.3)	c	c
	Azerbaijan	51.6	(1.6)	45.5	(2.2)	c	c	c	c	59.4	(1.3)	53.8	(1.7)	c	c	c	c
	Brazil	33.7	(1.1)	26.5	(1.4)	30.2	(4.1)	c	c	48.4	(1.2)	40.9	(1.3)	44.1	(4.0)	c	c
	Bulgaria	42.7	(2.1)	25.5	(1.5)	25.7	(2.2)	31.5	(5.4)	49.8	(2.0)	39.7	(1.6)	44.2	(2.6)	51.7	(7.0)
	Chile	26.4	(1.3)	26.0	(1.1)	37.0	(2.8)	c	c	32.0	(1.4)	30.2	(1.2)	43.4	(3.3)	c	c
	Colombia	44.3	(1.9)	38.4	(1.7)	c	c	c	c	63.7	(1.5)	60.8	(2.2)	c	c	c	c
	Croatia	32.3	(1.8)	25.4	(1.1)	31.7	(1.8)	41.4	(3.5)	34.7	(2.3)	34.7	(1.1)	44.8	(2.1)	51.6	(3.7)
	Estonia	24.5	(2.7)	11.5	(0.6)	13.2	(1.1)	17.3	(1.9)	32.8	(3.7)	28.6	(1.2)	38.1	(2.2)	49.8	(2.5)
	Hong Kong-China	22.9	(3.0)	19.5	(0.9)	27.8	(1.4)	38.0	(1.8)	24.2	(2.8)	28.5	(1.1)	41.7	(1.5)	57.6	(1.7)
	Indonesia	61.2	(1.6)	48.0	(3.7)	c	c	c	c	64.6	(1.3)	57.9	(3.5)	c	c	c	c
	Israel	36.7	(1.4)	38.1	(1.2)	50.4	(2.4)	61.3	(3.5)	35.2	(1.7)	36.3	(1.3)	45.7	(2.4)	56.2	(3.2)
	Jordan	62.6	(1.2)	64.2	(1.3)	75.4	(3.3)	c	c	74.3	(1.1)	80.1	(1.0)	88.3	(2.4)	c	c
	Kyrgyzstan	70.3	(0.8)	37.8	(2.1)	c	c	c	c	74.2	(0.9)	44.7	(2.4)	c	c	c	c
	Latvia	20.2	(2.2)	11.4	(0.9)	15.8	(1.7)	26.3	(4.6)	25.8	(2.0)	20.7	(1.0)	29.0	(2.2)	40.7	(5.2)
	Liechtenstein	21.5	(7.3)	10.1	(2.4)	17.0	(4.5)	37.8	(8.9)	23.7	(7.2)	13.2	(2.6)	17.6	(4.9)	41.6	(9.2)
	Lithuania	20.7	(1.6)	17.2	(0.9)	26.4	(2.4)	38.7	(3.4)	25.4	(1.5)	25.3	(1.0)	37.0	(2.4)	43.9	(3.4)
	Macao-China	26.5	(2.2)	15.1	(0.9)	19.5	(1.8)	29.7	(3.5)	28.2	(2.4)	19.9	(0.9)	28.9	(1.9)	38.9	(4.0)
	Montenegro	42.4	(1.2)	26.7	(1.3)	31.3	(6.8)	c	c	46.8	(1.3)	34.6	(1.3)	46.9	(7.2)	c	c
	Qatar	49.2	(0.7)	47.5	(1.5)	c	c	c	c	51.2	(0.7)	56.5	(1.6)	c	c	c	c
	Romania	47.7	(2.1)	35.4	(1.7)	39.5	(4.9)	c	c	51.6	(1.8)	47.1	(1.5)	54.5	(4.7)	c	c
	Russian Federation	38.4	(2.7)	25.4	(1.2)	24.6	(2.1)	31.9	(4.0)	42.9	(2.3)	33.3	(1.2)	30.7	(2.5)	39.6	(3.6)
	Serbia	38.6	(1.8)	29.2	(1.3)	40.5	(3.7)	c	c	39.6	(1.7)	32.0	(1.5)	44.8	(4.2)	c	c
	Slovenia	22.0	(2.0)	21.2	(1.0)	27.6	(1.9)	43.1	(3.0)	19.7	(1.9)	21.2	(0.9)	30.5	(1.8)	44.6	(2.9)
	Chinese Taipei	21.9	(2.2)	16.3	(1.0)	23.9	(1.0)	33.5	(1.8)	25.2	(2.2)	21.3	(1.2)	34.8	(1.3)	45.0	(2.1)
	Thailand	67.6	(1.4)	61.0	(1.3)	68.6	(4.1)	c	c	70.3	(1.3)	61.7	(1.3)	66.9	(5.6)	c	c
	Tunisia	59.5	(1.3)	64.2	(1.7)	c	c	c	c	61.1	(1.3)	71.3	(1.8)	c	c	c	c
	Uruguay	29.1	(2.0)	23.7	(1.0)	30.2	(3.0)	c	c	34.3	(1.9)	30.3	(1.0)	43.3	(3.5)	c	c



[Part 1/1]

Table A3.13a School preparation of science-related careers (mean index), by performance group

		Index of school preparation of science-related careers									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.31	(0.03)	0.03	(0.02)	0.41	(0.03)	0.74	(0.03)	**-0.33**	(0.04)
	Austria	-0.23	(0.06)	-0.37	(0.03)	-0.08	(0.06)	0.07	(0.08)	**-0.15**	(0.07)
	Belgium	-0.29	(0.06)	-0.24	(0.02)	0.03	(0.03)	0.26	(0.04)	**-0.23**	(0.05)
	Canada	-0.06	(0.04)	0.20	(0.02)	0.45	(0.03)	0.74	(0.03)	**-0.29**	(0.04)
	Czech Republic	-0.14	(0.07)	-0.25	(0.03)	-0.17	(0.04)	0.09	(0.05)	**-0.26**	(0.06)
	Denmark	-0.21	(0.04)	-0.11	(0.02)	0.15	(0.05)	0.36	(0.07)	**-0.21**	(0.09)
	Finland	-0.15	(0.08)	0.09	(0.02)	0.19	(0.03)	0.35	(0.04)	**-0.16**	(0.06)
	France	-0.26	(0.05)	-0.06	(0.03)	0.44	(0.04)	0.71	(0.07)	**-0.27**	(0.07)
	Germany	-0.13	(0.08)	0.05	(0.03)	0.20	(0.04)	0.31	(0.06)	-0.11	(0.06)
	Greece	-0.06	(0.04)	-0.13	(0.02)	-0.19	(0.04)	-0.24	(0.12)	0.06	(0.14)
	Hungary	0.12	(0.05)	0.00	(0.03)	0.03	(0.05)	0.26	(0.09)	**-0.23**	(0.10)
	Iceland	-0.31	(0.04)	0.03	(0.02)	0.33	(0.04)	0.52	(0.07)	**-0.18**	(0.09)
	Ireland	-0.14	(0.04)	0.12	(0.03)	0.40	(0.04)	0.57	(0.05)	**-0.17**	(0.07)
	Italy	-0.05	(0.02)	-0.15	(0.02)	-0.05	(0.04)	0.15	(0.07)	**-0.20**	(0.06)
	Japan	-0.72	(0.05)	-0.59	(0.03)	-0.47	(0.04)	-0.21	(0.06)	**-0.27**	(0.08)
	Korea	-0.27	(0.04)	-0.28	(0.02)	-0.28	(0.03)	-0.21	(0.09)	-0.07	(0.09)
	Luxembourg	-0.09	(0.04)	-0.14	(0.02)	-0.10	(0.05)	-0.02	(0.08)	-0.07	(0.09)
	Mexico	0.51	(0.02)	0.43	(0.02)	0.61	(0.08)	c	c	c	c
	Netherlands	-0.39	(0.05)	-0.36	(0.02)	-0.15	(0.02)	0.16	(0.04)	**-0.31**	(0.04)
	New Zealand	-0.18	(0.05)	0.05	(0.03)	0.35	(0.03)	0.68	(0.03)	**-0.34**	(0.05)
	Norway	-0.48	(0.05)	-0.34	(0.02)	-0.15	(0.04)	0.00	(0.06)	**-0.15**	(0.08)
	Poland	0.15	(0.04)	0.03	(0.02)	-0.07	(0.03)	-0.01	(0.06)	-0.06	(0.06)
	Portugal	0.15	(0.03)	0.17	(0.02)	0.41	(0.05)	0.63	(0.10)	-0.22	(0.12)
	Slovak Republic	-0.07	(0.06)	-0.18	(0.03)	-0.14	(0.05)	0.04	(0.09)	**-0.18**	(0.09)
	Spain	-0.06	(0.03)	0.02	(0.02)	0.25	(0.03)	0.40	(0.06)	**-0.14**	(0.07)
	Sweden	-0.34	(0.05)	-0.09	(0.03)	0.04	(0.05)	0.26	(0.08)	**-0.22**	(0.10)
	Switzerland	-0.20	(0.04)	-0.13	(0.02)	0.23	(0.03)	0.59	(0.05)	**-0.36**	(0.05)
	Turkey	-0.10	(0.03)	-0.20	(0.04)	0.02	(0.11)	c	c	c	c
	United Kingdom	-0.18	(0.04)	0.10	(0.02)	0.38	(0.04)	0.75	(0.04)	**-0.37**	(0.05)
	United States	-0.01	(0.03)	0.22	(0.02)	0.44	(0.04)	0.67	(0.05)	**-0.23**	(0.05)
	OECD average	-0.17	(0.01)	-0.08	(0.00)	0.10	(0.01)	0.31	(0.01)	**-0.20**	(0.01)
Partners	Argentina	0.22	(0.03)	0.01	(0.04)	0.05	(0.11)	c	c	c	c
	Azerbaijan	0.64	(0.03)	0.69	(0.03)	c	c	c	c	c	c
	Brazil	0.20	(0.02)	0.06	(0.03)	0.40	(0.09)	c	c	c	c
	Bulgaria	0.41	(0.03)	0.38	(0.03)	0.40	(0.06)	0.51	(0.08)	-0.11	(0.10)
	Chile	0.24	(0.04)	0.16	(0.04)	0.39	(0.07)	c	c	c	c
	Colombia	0.59	(0.04)	0.38	(0.04)	c	c	c	c	c	c
	Croatia	0.26	(0.04)	0.15	(0.02)	0.19	(0.04)	0.31	(0.07)	-0.12	(0.07)
	Estonia	0.20	(0.06)	0.29	(0.02)	0.25	(0.03)	0.35	(0.04)	**-0.10**	(0.05)
	Hong Kong-China	-0.20	(0.06)	-0.21	(0.02)	-0.08	(0.04)	0.03	(0.05)	-0.11	(0.07)
	Indonesia	0.33	(0.02)	0.33	(0.05)	c	c	c	c	c	c
	Israel	-0.10	(0.04)	-0.11	(0.05)	0.00	(0.06)	0.05	(0.09)	-0.05	(0.11)
	Jordan	0.49	(0.03)	0.52	(0.03)	0.44	(0.07)	c	c	c	c
	Kyrgyzstan	0.67	(0.02)	0.46	(0.04)	c	c	c	c	c	c
	Latvia	0.27	(0.04)	0.19	(0.02)	0.25	(0.04)	0.26	(0.08)	-0.01	(0.10)
	Liechtenstein	-0.31	(0.16)	0.02	(0.09)	0.31	(0.13)	0.56	(0.21)	-0.26	(0.24)
	Lithuania	0.32	(0.04)	0.41	(0.02)	0.53	(0.04)	0.66	(0.06)	-0.12	(0.07)
	Macao-China	-0.10	(0.05)	-0.15	(0.02)	-0.23	(0.04)	-0.23	(0.07)	0.00	(0.09)
	Montenegro	0.47	(0.03)	0.21	(0.03)	0.17	(0.09)	c	c	c	c
	Qatar	0.15	(0.02)	0.21	(0.04)	c	c	c	c	c	c
	Romania	0.39	(0.04)	0.43	(0.04)	0.33	(0.08)	c	c	c	c
	Russian Federation	0.29	(0.03)	0.30	(0.02)	0.28	(0.04)	0.40	(0.08)	-0.13	(0.08)
	Serbia	0.32	(0.03)	0.06	(0.03)	0.01	(0.08)	c	c	c	c
	Slovenia	0.03	(0.04)	0.02	(0.02)	0.12	(0.03)	0.24	(0.04)	**-0.12**	(0.06)
	Chinese Taipei	0.17	(0.04)	0.28	(0.02)	0.22	(0.02)	0.28	(0.03)	-0.06	(0.04)
	Thailand	0.56	(0.02)	0.69	(0.02)	0.75	(0.06)	c	c	c	c
	Tunisia	0.56	(0.02)	0.55	(0.03)	c	c	c	c	c	c
	Uruguay	0.07	(0.03)	0.06	(0.03)	0.28	(0.06)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 1/2]

Table A3.13b Future-oriented motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		The subjects available at my school provide students with the basic skills and knowledge for a science-related career								The science subjects at my school provide students with the basic skills and knowledge for many different careers							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	81.0	(1.2)	92.1	(0.4)	97.0	(0.4)	97.9	(0.4)	76.2	(1.2)	88.7	(0.4)	94.6	(0.5)	95.6	(0.5)
	Austria	70.6	(1.9)	66.3	(1.2)	73.1	(1.9)	77.1	(2.6)	64.6	(2.2)	61.4	(1.3)	68.0	(2.1)	74.9	(2.4)
	Belgium	74.4	(2.1)	79.7	(0.9)	87.8	(0.8)	91.5	(1.1)	69.0	(1.8)	75.3	(1.0)	82.8	(0.9)	85.4	(1.6)
	Canada	83.0	(1.7)	90.5	(0.5)	94.2	(0.6)	95.9	(0.6)	80.0	(1.5)	88.3	(0.6)	91.9	(0.7)	94.3	(0.7)
	Czech Republic	82.2	(2.3)	78.2	(1.4)	79.1	(2.1)	88.5	(1.6)	74.4	(2.4)	71.4	(1.2)	76.4	(1.9)	81.6	(2.1)
	Denmark	74.0	(1.9)	78.2	(1.0)	82.4	(1.6)	88.0	(2.5)	79.4	(2.0)	84.8	(0.9)	89.3	(1.4)	93.7	(2.0)
	Finland	82.9	(3.0)	89.7	(0.7)	91.9	(1.0)	92.3	(1.2)	76.4	(3.2)	83.9	(1.1)	87.1	(1.2)	88.9	(1.7)
	France	72.5	(1.7)	78.1	(1.3)	91.2	(1.2)	93.5	(1.7)	74.5	(1.5)	83.2	(0.9)	91.3	(1.1)	92.9	(1.6)
	Germany	72.1	(2.1)	77.6	(1.2)	82.9	(1.4)	83.5	(1.7)	72.2	(2.7)	79.1	(1.3)	82.7	(1.4)	82.3	(1.9)
	Greece	83.4	(1.5)	77.0	(1.0)	75.6	(2.5)	70.4	(4.2)	76.7	(1.5)	73.8	(0.9)	71.9	(2.2)	66.3	(4.2)
	Hungary	86.1	(1.8)	82.3	(0.9)	82.9	(1.5)	86.0	(2.1)	81.9	(1.7)	82.3	(0.9)	82.5	(1.4)	88.2	(2.1)
	Iceland	79.2	(1.6)	87.6	(0.8)	90.9	(1.7)	92.7	(2.1)	73.7	(1.8)	82.2	(0.8)	89.4	(1.5)	90.4	(2.5)
	Ireland	85.0	(1.7)	90.9	(0.8)	95.8	(0.9)	96.9	(1.1)	79.8	(1.9)	86.9	(0.8)	90.7	(1.2)	91.5	(1.4)
	Italy	79.8	(1.0)	73.9	(1.0)	74.3	(1.7)	79.7	(2.6)	77.6	(1.0)	78.6	(0.8)	81.0	(1.1)	84.6	(1.9)
	Japan	51.6	(2.4)	64.4	(1.5)	72.4	(1.6)	78.8	(1.8)	50.7	(2.2)	50.0	(1.5)	52.7	(1.9)	62.4	(2.4)
	Korea	77.4	(1.7)	78.3	(0.9)	78.5	(1.7)	79.7	(2.7)	69.1	(2.2)	67.7	(1.0)	65.6	(1.6)	65.6	(3.1)
	Luxembourg	75.6	(1.6)	75.3	(1.0)	77.3	(1.6)	78.8	(2.8)	75.9	(1.4)	77.3	(1.0)	76.3	(2.1)	75.4	(2.9)
	Mexico	93.2	(0.7)	92.0	(0.6)	94.1	(1.9)	c	c	87.0	(0.7)	86.0	(0.6)	86.5	(2.2)	c	c
	Netherlands	74.1	(2.4)	80.7	(0.9)	93.0	(0.8)	95.3	(1.2)	67.6	(2.4)	79.4	(1.0)	89.5	(0.9)	93.1	(0.9)
	New Zealand	81.8	(1.7)	92.5	(0.7)	97.3	(0.7)	98.6	(0.5)	79.5	(1.8)	87.7	(0.9)	92.9	(1.1)	94.6	(1.0)
	Norway	64.3	(2.1)	64.9	(1.1)	67.2	(2.3)	68.1	(3.5)	68.7	(2.1)	76.1	(1.1)	82.1	(1.7)	83.4	(2.3)
	Poland	88.2	(1.2)	86.7	(0.7)	83.7	(1.3)	81.8	(2.6)	82.8	(1.5)	77.3	(0.9)	73.3	(1.4)	74.6	(3.1)
	Portugal	90.2	(1.1)	91.9	(0.7)	95.4	(1.0)	97.3	(1.8)	88.7	(1.3)	91.1	(0.6)	93.1	(1.2)	94.3	(2.2)
	Slovak Republic	80.3	(1.9)	74.9	(1.6)	76.4	(2.0)	79.6	(3.6)	78.5	(1.9)	77.3	(1.2)	79.7	(2.0)	82.6	(2.5)
	Spain	81.7	(1.2)	86.9	(0.7)	89.8	(1.1)	87.2	(2.3)	80.0	(1.5)	83.2	(0.7)	87.6	(1.0)	87.2	(1.8)
	Sweden	72.7	(2.0)	83.2	(1.0)	83.8	(1.7)	87.7	(2.0)	70.8	(2.1)	78.1	(1.0)	77.2	(2.2)	83.6	(2.6)
	Switzerland	74.7	(1.7)	77.6	(0.9)	84.5	(1.2)	90.0	(1.5)	71.0	(1.5)	74.8	(0.9)	84.0	(1.1)	88.4	(1.3)
	Turkey	76.0	(1.3)	73.6	(1.6)	79.3	(4.1)	c	c	75.1	(1.2)	70.0	(1.5)	75.1	(4.2)	c	c
	United Kingdom	83.5	(1.6)	92.3	(0.5)	95.1	(0.7)	97.9	(0.6)	78.0	(1.5)	86.5	(0.7)	90.2	(1.0)	94.0	(0.9)
	United States	85.8	(1.2)	92.2	(0.6)	95.2	(0.9)	96.4	(0.9)	79.6	(1.6)	87.8	(0.9)	90.6	(1.3)	93.6	(1.8)
	OECD average	78.2	(0.3)	81.6	(0.2)	85.3	(0.3)	87.5	(0.4)	74.9	(0.4)	79.1	(0.2)	82.7	(0.3)	85.1	(0.4)
Partners	Argentina	85.3	(1.1)	78.6	(1.4)	75.5	(5.5)	c	c	82.6	(1.1)	80.2	(1.3)	81.2	(3.8)	c	c
	Azerbaijan	94.3	(0.6)	93.3	(0.8)	c	c	c	c	88.0	(1.0)	91.5	(0.7)	c	c	c	c
	Brazil	85.7	(0.6)	81.5	(1.2)	86.8	(2.8)	c	c	82.3	(0.9)	78.3	(1.2)	87.7	(2.8)	c	c
	Bulgaria	91.8	(0.9)	90.4	(0.8)	90.6	(1.8)	91.7	(2.8)	88.0	(1.0)	88.6	(0.8)	89.8	(1.8)	91.5	(2.9)
	Chile	79.8	(1.4)	75.9	(1.5)	82.8	(2.2)	c	c	84.9	(1.0)	82.7	(1.1)	84.5	(2.4)	c	c
	Colombia	92.0	(1.0)	85.1	(1.6)	c	c	c	c	93.8	(0.7)	92.1	(1.0)	c	c	c	c
	Croatia	89.7	(1.4)	86.7	(0.7)	86.1	(1.5)	92.5	(1.8)	84.8	(1.5)	84.4	(0.8)	85.3	(1.7)	88.0	(2.5)
	Estonia	88.6	(2.2)	88.1	(0.8)	87.7	(1.2)	88.5	(1.5)	82.7	(2.5)	89.6	(0.7)	88.7	(1.2)	90.4	(1.6)
	Hong Kong-China	79.7	(2.2)	82.5	(0.8)	86.5	(1.1)	87.9	(1.3)	76.1	(2.4)	76.9	(1.1)	79.2	(1.5)	78.0	(1.8)
	Indonesia	93.0	(0.6)	92.4	(1.2)	c	c	c	c	83.5	(0.8)	88.1	(0.9)	c	c	c	c
	Israel	78.8	(1.1)	78.3	(1.5)	77.1	(2.4)	76.4	(4.2)	73.5	(1.3)	73.2	(1.4)	74.3	(2.0)	76.3	(3.2)
	Jordan	91.3	(0.7)	87.7	(0.8)	82.6	(2.8)	c	c	86.4	(0.8)	86.9	(0.8)	83.7	(3.4)	c	c
	Kyrgyzstan	93.6	(0.3)	89.9	(1.3)	c	c	c	c	89.2	(0.5)	87.3	(1.6)	c	c	c	c
	Latvia	89.4	(1.5)	91.6	(0.6)	90.8	(1.2)	89.9	(2.9)	85.1	(1.7)	85.6	(0.8)	87.8	(1.5)	86.7	(3.1)
	Liechtenstein	74.7	(7.3)	81.6	(2.9)	83.7	(5.8)	91.1	(5.4)	59.1	(8.8)	71.5	(4.1)	76.7	(5.7)	86.6	(6.5)
	Lithuania	93.6	(1.2)	95.3	(0.4)	95.9	(0.9)	97.2	(1.5)	86.0	(1.4)	87.7	(0.7)	91.6	(1.1)	92.8	(1.9)
	Macao-China	83.3	(2.5)	81.0	(1.0)	77.8	(1.6)	78.4	(3.4)	78.2	(2.9)	79.0	(0.9)	75.1	(1.8)	69.9	(3.9)
	Montenegro	90.6	(0.7)	84.0	(0.9)	85.6	(3.6)	c	c	87.0	(0.9)	82.3	(1.0)	78.7	(4.1)	c	c
	Qatar	81.8	(0.6)	82.3	(1.3)	c	c	c	c	75.9	(0.7)	78.9	(1.5)	c	c	c	c
	Romania	92.0	(1.0)	92.6	(1.1)	86.2	(3.6)	c	c	87.7	(1.0)	89.9	(1.2)	86.9	(2.4)	c	c
	Russian Federation	89.4	(1.2)	90.4	(0.7)	89.5	(1.1)	88.3	(3.4)	88.1	(1.0)	87.1	(0.9)	86.3	(1.4)	89.1	(2.7)
	Serbia	88.8	(1.0)	82.7	(0.9)	78.6	(2.9)	c	c	84.1	(0.9)	81.6	(0.8)	81.7	(2.6)	c	c
	Slovenia	84.6	(1.5)	84.4	(0.8)	87.6	(1.2)	89.9	(1.5)	81.7	(1.7)	82.0	(0.8)	84.5	(1.3)	87.2	(1.7)
	Chinese Taipei	87.4	(1.5)	90.0	(0.7)	87.4	(0.8)	86.5	(1.1)	83.7	(1.6)	86.2	(0.7)	82.6	(1.1)	82.7	(1.5)
	Thailand	96.6	(0.4)	98.3	(0.3)	98.7	(1.0)	c	c	94.7	(0.5)	97.1	(0.4)	96.6	(1.5)	c	c
	Tunisia	93.3	(0.6)	89.9	(0.8)	c	c	c	c	85.4	(0.8)	87.5	(0.9)	c	c	c	c
	Uruguay	84.5	(1.4)	85.6	(1.0)	89.8	(2.4)	c	c	85.3	(1.0)	87.1	(0.9)	89.9	(2.2)	c	c



[Part 2/2]

Table A3.13b Future-oriented motivation to learn science (underlying percentages), by performance group

		Percentage of students agreeing or strongly agreeing with the following statements															
		The subjects I study provide me with the basic skills and knowledge for a science-related career								My teachers equip me with the basic skills and knowledge I need for a science-related career							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	57.8	(1.6)	65.5	(0.7)	76.1	(1.0)	86.2	(1.0)	66.2	(1.7)	76.8	(0.6)	85.6	(0.9)	91.0	(0.9)
	Austria	60.9	(2.4)	55.7	(1.3)	65.2	(2.2)	70.4	(3.0)	58.4	(2.2)	57.0	(1.3)	65.6	(2.2)	69.8	(2.8)
	Belgium	57.7	(1.8)	58.2	(1.0)	66.9	(1.5)	77.9	(1.6)	59.0	(2.0)	62.2	(1.1)	71.5	(1.4)	80.9	(1.6)
	Canada	69.5	(2.1)	77.5	(0.8)	83.0	(1.0)	90.5	(1.1)	74.4	(2.1)	82.0	(0.8)	88.1	(1.0)	93.3	(0.9)
	Czech Republic	67.1	(3.0)	63.3	(1.5)	68.5	(2.2)	80.2	(2.2)	66.7	(2.7)	67.9	(1.4)	71.4	(2.0)	79.5	(2.6)
	Denmark	67.2	(2.2)	72.9	(1.0)	83.8	(1.9)	87.6	(2.8)	67.8	(1.9)	72.0	(1.1)	81.2	(1.9)	86.2	(2.9)
	Finland	75.0	(3.6)	82.9	(1.0)	88.0	(1.1)	90.4	(1.0)	71.3	(4.1)	82.2	(0.8)	84.4	(1.1)	87.2	(1.5)
	France	59.2	(2.0)	67.1	(1.3)	83.4	(1.4)	90.3	(1.8)	62.5	(1.8)	70.4	(1.3)	84.9	(1.6)	90.1	(2.0)
	Germany	64.1	(3.1)	70.7	(1.4)	77.2	(1.8)	80.1	(2.0)	62.6	(2.5)	69.4	(1.3)	73.1	(1.7)	76.7	(2.2)
	Greece	66.2	(1.9)	68.9	(1.3)	71.7	(2.4)	72.4	(4.7)	65.0	(1.7)	66.8	(1.2)	65.1	(2.7)	66.2	(5.0)
	Hungary	76.4	(2.6)	73.2	(1.1)	74.2	(2.1)	82.5	(3.3)	74.8	(2.1)	73.6	(1.1)	73.5	(1.8)	78.7	(3.2)
	Iceland	62.5	(1.7)	74.7	(1.1)	87.2	(2.0)	92.9	(2.4)	60.5	(2.0)	72.2	(0.9)	81.3	(1.9)	86.1	(2.6)
	Ireland	61.3	(2.2)	71.7	(1.2)	84.7	(1.6)	89.6	(1.6)	64.9	(2.1)	72.7	(1.3)	80.3	(1.8)	85.0	(2.1)
	Italy	67.9	(1.4)	63.5	(1.0)	68.1	(1.5)	76.2	(2.6)	72.0	(1.1)	66.8	(1.0)	68.8	(1.6)	73.8	(2.7)
	Japan	49.9	(2.6)	52.1	(1.4)	55.4	(2.3)	65.1	(2.2)	50.5	(2.0)	53.2	(1.5)	55.5	(1.9)	61.4	(2.2)
	Korea	62.4	(2.1)	67.1	(1.1)	70.2	(1.5)	73.0	(2.8)	71.7	(2.1)	69.4	(1.0)	67.4	(1.7)	68.6	(2.3)
	Luxembourg	67.0	(1.6)	63.5	(1.0)	65.1	(1.9)	64.4	(3.1)	65.1	(1.6)	60.7	(1.1)	64.5	(2.3)	65.9	(3.2)
	Mexico	87.3	(0.9)	86.0	(0.8)	91.0	(1.9)	c	c	86.4	(0.8)	84.2	(0.8)	87.9	(2.3)	c	c
	Netherlands	54.5	(2.8)	53.3	(1.3)	56.8	(1.7)	68.3	(2.1)	60.2	(2.9)	62.7	(1.5)	65.9	(1.7)	75.7	(2.3)
	New Zealand	63.4	(2.5)	68.7	(1.2)	79.8	(1.3)	89.0	(1.5)	69.7	(2.4)	77.3	(1.1)	85.4	(1.2)	91.4	(1.3)
	Norway	56.1	(2.1)	63.4	(1.0)	72.4	(2.0)	80.5	(3.0)	57.5	(2.2)	65.7	(1.2)	73.4	(2.0)	81.1	(2.7)
	Poland	81.2	(1.7)	80.0	(0.9)	78.9	(1.4)	82.2	(2.6)	80.3	(1.8)	77.3	(0.8)	75.0	(1.6)	76.5	(3.0)
	Portugal	80.9	(1.5)	76.5	(1.0)	81.9	(2.3)	90.1	(3.8)	79.9	(1.4)	77.3	(1.0)	81.9	(1.7)	89.7	(3.7)
	Slovak Republic	71.7	(2.0)	67.9	(1.6)	70.6	(2.0)	78.2	(3.6)	69.9	(2.1)	67.5	(1.4)	66.8	(2.3)	71.6	(3.3)
	Spain	69.4	(1.5)	71.2	(0.8)	80.4	(1.2)	87.0	(1.7)	71.7	(1.4)	73.3	(0.7)	79.5	(1.3)	82.7	(2.4)
	Sweden	63.0	(2.1)	72.7	(1.2)	79.0	(1.9)	85.7	(2.4)	64.9	(2.4)	73.6	(1.2)	75.8	(1.7)	77.5	(2.9)
	Switzerland	59.4	(2.0)	64.0	(1.2)	76.4	(1.7)	87.6	(2.1)	62.1	(1.8)	66.4	(1.1)	79.2	(1.4)	87.7	(1.3)
	Turkey	62.8	(1.5)	60.9	(1.8)	74.5	(4.7)	c	c	66.2	(1.1)	63.1	(1.6)	68.6	(4.5)	c	c
	United Kingdom	65.5	(1.7)	74.4	(0.9)	82.7	(1.6)	91.8	(1.1)	72.4	(1.6)	82.6	(0.8)	88.4	(1.2)	93.8	(0.9)
	United States	73.9	(1.6)	79.7	(0.9)	85.4	(1.5)	90.1	(1.7)	76.7	(1.3)	85.2	(0.9)	89.4	(1.2)	92.1	(1.5)
	OECD average	65.4	(0.4)	68.6	(0.2)	75.5	(0.3)	82.1	(0.5)	67.1	(0.4)	70.9	(0.2)	75.8	(0.3)	80.7	(0.5)
Partners	Argentina	76.7	(1.2)	71.2	(1.3)	76.9	(4.3)	c	c	77.5	(1.3)	75.1	(1.4)	78.3	(4.1)	c	c
	Azerbaijan	88.6	(0.8)	91.1	(1.2)	c	c	c	c	90.3	(0.7)	92.8	(0.8)	c	c	c	c
	Brazil	80.1	(0.8)	76.4	(1.3)	82.5	(2.9)	c	c	79.9	(0.9)	74.2	(1.3)	80.3	(3.4)	c	c
	Bulgaria	83.1	(1.3)	82.8	(1.1)	83.6	(1.9)	86.8	(3.4)	83.7	(1.3)	84.3	(1.0)	82.0	(2.5)	84.0	(3.7)
	Chile	78.0	(1.3)	76.3	(1.2)	82.1	(2.2)	c	c	76.1	(1.4)	74.4	(1.1)	80.6	(2.8)	c	c
	Colombia	86.2	(1.3)	80.7	(1.8)	c	c	c	c	85.6	(1.0)	80.4	(1.4)	c	c	c	c
	Croatia	82.0	(1.5)	79.4	(0.9)	82.8	(1.6)	88.9	(2.4)	82.4	(1.4)	80.6	(0.8)	79.5	(1.6)	82.7	(2.7)
	Estonia	78.5	(2.6)	86.2	(0.8)	88.2	(1.1)	92.3	(1.3)	75.8	(3.2)	82.2	(1.0)	80.3	(1.5)	84.2	(2.1)
	Hong Kong-China	65.2	(3.1)	63.0	(1.2)	67.0	(1.5)	74.9	(2.0)	76.1	(2.5)	75.6	(1.0)	77.2	(1.3)	81.2	(1.7)
	Indonesia	87.4	(1.0)	86.8	(2.0)	c	c	c	c	91.2	(0.7)	89.6	(1.2)	c	c	c	c
	Israel	63.0	(1.6)	64.5	(1.6)	67.2	(2.4)	75.9	(4.0)	62.3	(1.6)	63.0	(1.7)	65.2	(2.6)	69.4	(3.6)
	Jordan	84.9	(0.9)	90.2	(0.9)	91.9	(1.7)	c	c	82.3	(1.1)	86.2	(0.8)	88.6	(2.2)	c	c
	Kyrgyzstan	88.5	(0.6)	85.2	(1.8)	c	c	c	c	91.6	(0.4)	88.2	(1.3)	c	c	c	c
	Latvia	82.0	(2.0)	84.0	(1.0)	87.1	(1.8)	89.4	(2.6)	82.6	(1.8)	84.0	(0.8)	86.1	(1.4)	85.9	(3.0)
	Liechtenstein	65.6	(7.4)	67.0	(3.9)	74.3	(5.1)	80.4	(7.4)	56.2	(7.6)	70.2	(3.8)	81.4	(4.9)	86.5	(6.0)
	Lithuania	85.2	(1.4)	89.3	(0.7)	93.0	(1.2)	94.7	(1.5)	84.4	(1.3)	87.9	(0.9)	90.0	(1.5)	93.7	(1.9)
	Macao-China	73.8	(2.6)	69.4	(1.1)	68.0	(2.2)	67.8	(4.3)	76.3	(2.2)	72.2	(1.0)	68.1	(1.9)	70.1	(3.7)
	Montenegro	84.9	(1.0)	82.2	(1.1)	83.7	(3.9)	c	c	87.6	(0.8)	82.7	(1.0)	86.1	(3.9)	c	c
	Qatar	74.8	(0.7)	80.7	(1.5)	c	c	c	c	72.2	(0.7)	76.1	(1.5)	c	c	c	c
	Romania	84.0	(1.2)	84.3	(1.1)	87.7	(3.1)	c	c	83.4	(1.3)	84.0	(1.2)	82.0	(3.2)	c	c
	Russian Federation	82.7	(1.3)	84.5	(0.9)	84.5	(1.6)	85.8	(2.9)	83.3	(1.4)	84.5	(0.7)	86.4	(1.5)	88.4	(2.2)
	Serbia	83.6	(1.1)	75.9	(0.9)	77.4	(2.8)	c	c	84.8	(1.0)	74.6	(1.1)	72.1	(2.8)	c	c
	Slovenia	73.9	(2.0)	75.5	(1.1)	81.0	(1.8)	83.9	(2.2)	77.9	(1.9)	78.7	(1.1)	83.9	(1.6)	83.6	(2.5)
	Chinese Taipei	84.0	(1.5)	88.0	(0.7)	86.5	(1.0)	87.5	(1.3)	86.2	(1.4)	88.7	(0.7)	86.5	(1.0)	87.4	(1.2)
	Thailand	93.7	(0.5)	95.3	(0.5)	97.0	(1.8)	c	c	95.1	(0.7)	95.4	(0.4)	96.2	(1.9)	c	c
	Tunisia	83.0	(1.0)	83.9	(1.1)	c	c	c	c	80.7	(0.8)	82.7	(1.2)	c	c	c	c
	Uruguay	77.8	(1.2)	75.8	(1.2)	80.4	(2.7)	c	c	78.6	(1.2)	76.2	(1.3)	79.8	(2.6)	c	c

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Table A3.14a Student information on science-related careers (mean index), by performance group

		Index of student information on science-related careers									
		Lowest performers		Moderate performers		Strong performers		Top performers		Difference in the mean index between strong performers and top performers	
		Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	-0.06	(0.04)	0.08	(0.02)	0.29	(0.02)	0.48	(0.03)	**-0.18**	(0.04)
	Austria	-0.05	(0.05)	-0.15	(0.02)	-0.05	(0.03)	-0.05	(0.05)	0.00	(0.06)
	Belgium	-0.15	(0.05)	-0.25	(0.02)	-0.25	(0.02)	-0.21	(0.03)	-0.04	(0.04)
	Canada	0.18	(0.05)	0.23	(0.02)	0.32	(0.02)	0.44	(0.04)	**-0.13**	(0.05)
	Czech Republic	-0.11	(0.05)	-0.11	(0.03)	-0.11	(0.05)	-0.03	(0.05)	-0.07	(0.08)
	Denmark	-0.14	(0.05)	-0.17	(0.03)	0.03	(0.04)	0.13	(0.08)	-0.10	(0.09)
	Finland	0.10	(0.10)	0.09	(0.02)	0.13	(0.03)	0.21	(0.03)	-0.09	(0.06)
	France	-0.09	(0.05)	-0.06	(0.02)	0.15	(0.04)	0.23	(0.06)	-0.08	(0.08)
	Germany	-0.11	(0.06)	0.01	(0.02)	0.06	(0.03)	0.14	(0.05)	-0.08	(0.07)
	Greece	0.28	(0.04)	0.33	(0.03)	0.43	(0.05)	0.45	(0.10)	-0.02	(0.11)
	Hungary	0.07	(0.04)	-0.06	(0.02)	-0.05	(0.03)	0.04	(0.06)	-0.09	(0.07)
	Iceland	-0.34	(0.04)	-0.09	(0.02)	0.15	(0.04)	0.32	(0.06)	**-0.17**	(0.07)
	Ireland	-0.07	(0.06)	-0.06	(0.02)	0.08	(0.04)	0.22	(0.07)	-0.13	(0.09)
	Italy	0.08	(0.03)	0.07	(0.01)	0.05	(0.02)	0.06	(0.05)	-0.01	(0.06)
	Japan	-0.42	(0.05)	-0.41	(0.02)	-0.37	(0.03)	-0.34	(0.03)	-0.02	(0.04)
	Korea	-0.41	(0.05)	-0.39	(0.02)	-0.27	(0.03)	-0.10	(0.06)	**-0.17**	(0.06)
	Luxembourg	-0.06	(0.04)	-0.14	(0.02)	-0.05	(0.03)	-0.05	(0.07)	0.00	(0.08)
	Mexico	-0.40	(0.04)	-0.51	(0.03)	-0.14	(0.08)	c	c	c	c
	Netherlands	-0.28	(0.08)	-0.46	(0.03)	-0.32	(0.03)	-0.03	(0.04)	**-0.29**	(0.05)
	New Zealand	0.07	(0.05)	0.07	(0.03)	0.17	(0.04)	0.32	(0.04)	**-0.15**	(0.05)
	Norway	-0.06	(0.05)	-0.14	(0.02)	-0.14	(0.04)	0.02	(0.06)	**-0.16**	(0.08)
	Poland	0.36	(0.04)	0.29	(0.02)	0.29	(0.04)	0.39	(0.07)	-0.10	(0.09)
	Portugal	0.31	(0.04)	0.41	(0.02)	0.50	(0.04)	0.48	(0.09)	0.02	(0.10)
	Slovak Republic	0.07	(0.05)	-0.08	(0.03)	-0.07	(0.05)	-0.01	(0.06)	-0.06	(0.08)
	Spain	-0.16	(0.04)	-0.02	(0.02)	0.20	(0.03)	0.24	(0.05)	-0.04	(0.06)
	Sweden	-0.22	(0.06)	-0.14	(0.03)	-0.08	(0.04)	-0.05	(0.06)	-0.02	(0.07)
	Switzerland	0.00	(0.04)	-0.02	(0.02)	0.13	(0.03)	0.18	(0.05)	-0.05	(0.06)
	Turkey	0.02	(0.04)	0.41	(0.04)	1.03	(0.07)	c	c	c	c
	United Kingdom	-0.02	(0.04)	-0.04	(0.02)	-0.02	(0.03)	0.17	(0.04)	**-0.19**	(0.05)
	United States	0.37	(0.05)	0.32	(0.03)	0.35	(0.04)	0.43	(0.07)	-0.07	(0.09)
	OECD average	-0.03	(0.01)	-0.03	(0.00)	0.06	(0.01)	0.15	(0.01)	**-0.09**	(0.01)
Partners	Argentina	-0.45	(0.05)	-0.54	(0.04)	-0.42	(0.10)	c	c	c	c
	Azerbaijan	0.35	(0.03)	0.39	(0.04)	c	c	c	c	c	c
	Bulgaria	0.30	(0.04)	0.21	(0.03)	0.21	(0.05)	0.23	(0.10)	-0.02	(0.11)
	Brazil	0.37	(0.02)	0.24	(0.03)	0.47	(0.08)	c	c	c	c
	Chile	0.23	(0.03)	0.25	(0.03)	0.38	(0.06)	c	c	c	c
	Colombia	0.00	(0.04)	-0.06	(0.04)	c	c	c	c	c	c
	Croatia	0.01	(0.03)	-0.02	(0.02)	0.12	(0.03)	0.27	(0.07)	-0.14	(0.08)
	Estonia	0.24	(0.06)	0.04	(0.02)	-0.13	(0.03)	-0.16	(0.04)	0.03	(0.05)
	Hong Kong-China	0.24	(0.07)	0.22	(0.02)	0.22	(0.03)	0.25	(0.03)	-0.03	(0.05)
	Indonesia	0.37	(0.02)	0.30	(0.04)	c	c	c	c	c	c
	Israel	0.17	(0.04)	0.17	(0.04)	0.29	(0.06)	0.31	(0.08)	-0.03	(0.09)
	Jordan	0.44	(0.03)	0.45	(0.03)	0.38	(0.09)	c	c	c	c
	Kyrgyzstan	0.29	(0.02)	0.35	(0.04)	c	c	c	c	c	c
	Latvia	0.26	(0.04)	0.03	(0.02)	-0.04	(0.04)	0.00	(0.08)	-0.04	(0.09)
	Liechtenstein	0.00	(0.13)	0.16	(0.07)	0.10	(0.12)	-0.07	(0.18)	0.17	(0.24)
	Lithuania	0.16	(0.02)	0.22	(0.02)	0.30	(0.04)	0.37	(0.07)	-0.06	(0.09)
	Macao-China	-0.10	(0.05)	-0.14	(0.02)	-0.11	(0.03)	0.00	(0.10)	-0.11	(0.12)
	Montenegro	0.08	(0.02)	-0.13	(0.02)	-0.16	(0.09)	c	c	c	c
	Qatar	0.52	(0.02)	0.65	(0.04)	c	c	c	c	c	c
	Romania	0.15	(0.03)	-0.03	(0.03)	0.06	(0.08)	c	c	c	c
	Russian Federation	0.46	(0.03)	0.37	(0.02)	0.39	(0.05)	0.41	(0.06)	-0.02	(0.09)
	Serbia	0.23	(0.03)	0.05	(0.02)	0.19	(0.07)	c	c	c	c
	Slovenia	0.20	(0.04)	-0.01	(0.02)	0.00	(0.03)	0.06	(0.05)	-0.06	(0.07)
	Chinese Taipei	-0.11	(0.05)	-0.01	(0.02)	0.14	(0.02)	0.23	(0.03)	**-0.09**	(0.04)
	Thailand	0.27	(0.02)	0.23	(0.02)	0.42	(0.06)	c	c	c	c
	Tunisia	0.41	(0.03)	0.42	(0.03)	c	c	c	c	c	c
	Uruguay	-0.19	(0.05)	-0.28	(0.03)	-0.17	(0.07)	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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[Part 1/2]

Table A3.14b Student information on science-related careers (underlying percentages), by performance group

		Percentage of students who reported that they were very well informed or fairly informed about the following topics															
		Science-related careers that are available in the job market								Where to find information about science-related careers							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	49.4	(1.6)	53.5	(0.7)	64.3	(1.2)	72.0	(1.3)	50.2	(1.7)	57.0	(0.8)	64.7	(1.2)	73.3	(1.3)
	Austria	43.7	(2.0)	40.6	(1.0)	44.3	(1.9)	43.4	(3.0)	44.1	(2.2)	43.9	(1.0)	51.5	(2.2)	53.3	(3.2)
	Belgium	43.3	(1.8)	39.2	(0.9)	44.0	(1.4)	47.6	(2.5)	43.6	(1.7)	42.1	(1.0)	41.2	(1.3)	42.5	(2.0)
	Canada	57.8	(1.7)	60.3	(0.9)	65.8	(1.2)	72.5	(1.4)	57.3	(2.0)	61.1	(0.7)	63.8	(1.1)	68.8	(1.4)
	Czech Republic	43.5	(3.2)	40.5	(1.5)	36.3	(1.8)	37.0	(2.1)	48.4	(2.6)	58.8	(1.4)	63.2	(2.4)	65.5	(2.5)
	Denmark	39.0	(2.2)	35.6	(1.2)	47.0	(2.2)	50.1	(4.3)	43.8	(2.4)	44.9	(1.2)	53.2	(1.9)	58.2	(3.6)
	Finland	54.2	(4.2)	46.1	(1.2)	45.8	(1.9)	49.3	(2.4)	60.8	(4.7)	62.0	(1.2)	66.4	(1.7)	67.9	(1.7)
	France	45.1	(2.0)	43.2	(1.2)	52.0	(2.3)	55.7	(3.3)	46.3	(2.0)	52.2	(1.3)	60.7	(2.5)	62.3	(3.1)
	Germany	41.2	(2.5)	44.8	(1.3)	46.6	(1.9)	51.6	(2.2)	44.2	(3.0)	55.5	(1.1)	61.2	(1.7)	62.2	(2.7)
	Greece	65.8	(2.1)	64.5	(1.2)	70.4	(2.2)	72.5	(3.9)	59.7	(2.1)	64.0	(1.1)	68.2	(2.9)	65.5	(4.7)
	Hungary	41.8	(2.8)	26.7	(1.2)	26.3	(1.8)	33.2	(3.3)	52.1	(2.2)	53.0	(1.1)	53.9	(1.8)	56.8	(3.0)
	Iceland	28.8	(1.8)	37.5	(1.2)	51.3	(2.0)	61.6	(3.5)	36.9	(1.9)	44.1	(1.1)	51.4	(2.3)	53.4	(3.7)
	Ireland	47.6	(2.3)	50.3	(1.1)	58.6	(1.9)	64.8	(3.3)	51.0	(2.2)	52.3	(1.2)	57.9	(1.7)	61.6	(2.8)
	Italy	48.7	(1.4)	54.2	(0.8)	60.5	(1.5)	64.0	(2.9)	46.5	(1.2)	51.0	(0.7)	52.4	(2.1)	53.2	(3.3)
	Japan	32.3	(1.7)	27.5	(1.0)	27.1	(1.3)	28.5	(1.9)	29.1	(1.9)	27.4	(1.0)	31.3	(1.5)	32.9	(2.0)
	Korea	34.0	(2.6)	30.6	(1.2)	36.7	(1.8)	46.1	(2.9)	34.8	(2.4)	40.8	(1.0)	45.7	(1.8)	48.4	(3.9)
	Luxembourg	42.5	(1.7)	39.6	(1.1)	44.4	(1.9)	44.2	(4.1)	45.6	(1.7)	40.9	(1.0)	44.0	(2.0)	41.5	(4.2)
	Mexico	26.7	(1.4)	20.0	(0.9)	38.7	(4.0)	c	c	35.9	(1.2)	36.0	(1.0)	53.1	(3.4)	c	c
	Netherlands	39.7	(2.9)	31.6	(1.2)	38.2	(1.5)	49.5	(2.6)	43.4	(3.6)	41.6	(1.1)	47.8	(1.8)	58.2	(2.5)
	New Zealand	52.3	(2.2)	50.6	(1.3)	58.2	(1.9)	66.1	(1.9)	53.8	(2.6)	57.9	(1.3)	62.6	(2.1)	69.3	(2.1)
	Norway	44.7	(2.2)	39.6	(1.3)	40.3	(2.0)	48.6	(3.3)	48.3	(1.8)	42.9	(1.1)	41.8	(2.4)	47.7	(4.5)
	Poland	66.0	(1.8)	61.8	(1.1)	62.9	(1.9)	69.7	(3.3)	64.0	(2.3)	64.5	(1.0)	62.8	(1.7)	67.1	(2.6)
	Portugal	64.3	(1.6)	72.5	(1.0)	79.7	(1.8)	82.2	(4.4)	57.3	(1.8)	67.2	(1.0)	70.4	(1.9)	70.1	(4.7)
	Slovak Republic	53.6	(2.2)	45.7	(1.4)	43.3	(2.2)	47.6	(2.7)	53.8	(2.3)	56.4	(1.3)	60.0	(2.2)	64.8	(3.1)
	Spain	37.0	(1.7)	40.8	(0.8)	54.5	(1.6)	60.3	(3.4)	42.9	(1.8)	49.2	(0.9)	56.0	(1.5)	57.9	(2.8)
	Sweden	42.6	(3.0)	43.8	(1.4)	46.4	(2.1)	49.0	(3.0)	44.3	(2.6)	43.0	(1.3)	43.0	(1.9)	42.9	(3.1)
	Switzerland	45.2	(2.2)	43.3	(1.0)	49.2	(1.7)	50.4	(2.2)	49.8	(2.2)	56.2	(0.9)	67.1	(1.1)	67.0	(2.0)
	Turkey	54.4	(1.4)	67.3	(1.5)	88.6	(2.2)	c	c	56.8	(1.5)	73.6	(1.3)	90.2	(2.4)	c	c
	United Kingdom	47.7	(2.0)	45.7	(1.0)	49.0	(1.4)	57.6	(1.7)	51.7	(2.0)	51.6	(1.1)	54.3	(1.6)	63.3	(2.0)
	United States	63.4	(2.1)	62.9	(1.2)	67.5	(1.8)	71.9	(3.1)	65.5	(2.0)	64.3	(1.2)	65.1	(2.1)	66.4	(3.5)
	OECD average	47.0	(0.4)	45.5	(0.2)	50.4	(0.3)	55.2	(0.6)	48.9	(0.4)	51.6	(0.2)	55.8	(0.4)	58.6	(0.6)
Partners	Argentina	28.5	(1.7)	25.7	(1.5)	33.7	(4.8)	c	c	36.5	(1.7)	39.0	(1.8)	46.0	(7.2)	c	c
	Azerbaijan	59.0	(1.4)	58.6	(1.9)	c	c	c	c	56.7	(1.6)	59.3	(2.0)	c	c	c	c
	Brazil	66.3	(1.1)	64.8	(1.4)	74.9	(4.1)	c	c	61.6	(1.1)	60.7	(1.3)	72.7	(3.6)	c	c
	Bulgaria	54.0	(1.6)	45.2	(1.3)	42.2	(2.9)	47.1	(5.9)	56.1	(1.7)	58.0	(1.3)	61.2	(2.4)	65.4	(4.7)
	Chile	49.7	(1.6)	52.1	(1.4)	58.2	(3.0)	c	c	58.8	(1.1)	63.1	(1.3)	67.9	(2.6)	c	c
	Colombia	26.5	(1.8)	29.3	(1.5)	c	c	c	c	40.5	(2.1)	47.7	(1.9)	c	c	c	c
	Croatia	40.0	(2.0)	37.6	(1.1)	45.9	(1.9)	52.8	(3.7)	49.3	(2.0)	52.4	(1.0)	58.1	(1.8)	63.5	(3.8)
	Estonia	54.0	(3.1)	37.7	(1.4)	30.8	(1.8)	31.2	(2.5)	62.4	(3.3)	56.1	(1.3)	48.9	(1.9)	49.9	(2.6)
	Hong Kong-China	58.4	(3.9)	65.0	(1.4)	69.1	(1.8)	75.3	(1.6)	62.7	(2.7)	67.9	(1.1)	70.1	(1.6)	67.7	(2.2)
	Indonesia	54.4	(1.2)	54.3	(2.0)	c	c	c	c	58.2	(1.0)	57.4	(2.0)	c	c	c	c
	Israel	62.5	(1.5)	59.4	(1.4)	66.4	(2.8)	66.9	(3.6)	56.3	(1.4)	58.6	(1.4)	62.4	(2.4)	61.1	(3.7)
	Jordan	67.0	(1.3)	66.3	(1.1)	69.4	(3.8)	c	c	65.6	(1.1)	67.5	(1.2)	65.6	(3.1)	c	c
	Kyrgyzstan	54.9	(1.0)	51.0	(2.3)	c	c	c	c	50.5	(1.1)	59.8	(2.3)	c	c	c	c
	Latvia	54.6	(2.7)	41.1	(1.3)	36.9	(2.2)	43.2	(4.8)	58.2	(2.4)	52.1	(1.1)	51.3	(2.2)	52.1	(3.6)
	Liechtenstein	45.7	(7.6)	46.9	(3.7)	51.8	(6.1)	38.2	(9.5)	40.7	(7.2)	59.2	(3.5)	64.3	(6.1)	57.2	(9.1)
	Lithuania	47.4	(1.8)	53.1	(1.1)	61.3	(1.7)	67.4	(2.9)	61.7	(1.7)	70.2	(1.0)	71.9	(2.3)	72.0	(4.3)
	Macao-China	53.1	(3.6)	52.9	(1.2)	57.6	(1.9)	59.3	(3.9)	49.0	(2.7)	51.6	(1.0)	56.3	(2.2)	60.4	(5.3)
	Montenegro	44.2	(1.2)	36.5	(1.2)	42.2	(5.2)	c	c	46.9	(1.3)	38.6	(1.2)	34.5	(4.9)	c	c
	Qatar	73.0	(0.6)	72.7	(1.2)	c	c	c	c	68.3	(0.6)	74.6	(1.4)	c	c	c	c
	Romania	47.7	(1.7)	36.5	(1.9)	41.6	(5.2)	c	c	46.1	(1.4)	49.6	(1.4)	59.9	(4.1)	c	c
	Russian Federation	59.9	(2.2)	54.2	(1.1)	49.5	(2.2)	47.7	(3.7)	64.8	(1.5)	63.6	(1.3)	64.1	(2.5)	64.0	(4.4)
	Serbia	48.3	(1.4)	39.9	(1.0)	47.3	(4.3)	c	c	46.9	(1.3)	44.8	(1.1)	57.4	(3.4)	c	c
	Slovenia	52.2	(2.3)	39.0	(1.2)	39.4	(1.7)	44.0	(3.0)	58.2	(2.3)	52.4	(1.0)	54.2	(1.8)	56.2	(2.4)
	Chinese Taipei	48.5	(2.6)	53.7	(1.1)	64.0	(1.5)	72.7	(1.5)	50.2	(2.0)	66.7	(0.9)	75.5	(1.2)	75.8	(1.4)
	Thailand	64.1	(1.3)	60.1	(1.3)	68.4	(4.5)	c	c	64.8	(1.2)	71.0	(1.0)	75.5	(4.4)	c	c
	Tunisia	62.5	(1.3)	62.2	(1.4)	c	c	c	c	59.3	(1.2)	56.8	(1.7)	c	c	c	c
	Uruguay	34.0	(1.9)	26.0	(1.2)	34.5	(3.7)	c	c	46.8	(1.4)	48.4	(1.2)	54.6	(3.1)	c	c

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[Part 2/2]

Table A3.14b Student information on science-related careers (underlying percentages), by performance group

		Percentage of students who reported that they were very well informed or fairly informed about the following topics															
		The steps a student needs to take if they want a science-related a career								Employers or companies that hire people to work in science-related careers							
		Lowest performers		Moderate performers		Strong performers		Top performers		Lowest performers		Moderate performers		Strong performers		Top performers	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	51.3	(1.6)	55.0	(0.9)	61.3	(1.2)	68.8	(1.2)	46.3	(1.9)	39.8	(0.8)	40.2	(1.2)	41.7	(1.6)
	Austria	48.5	(2.7)	40.9	(1.0)	44.1	(1.9)	45.6	(3.6)	43.2	(2.3)	33.3	(1.0)	32.0	(1.7)	27.8	(2.3)
	Belgium	49.9	(2.1)	42.4	(0.9)	40.2	(1.2)	41.9	(1.9)	41.9	(1.8)	29.4	(0.8)	23.5	(1.1)	20.6	(1.5)
	Canada	57.2	(2.0)	58.6	(0.9)	61.2	(1.0)	67.7	(1.8)	48.8	(1.9)	43.8	(0.9)	38.9	(1.4)	40.0	(2.2)
	Czech Republic	48.4	(2.4)	47.2	(1.4)	48.8	(2.3)	54.2	(2.1)	42.7	(2.9)	36.1	(1.3)	35.8	(2.0)	33.3	(2.5)
	Denmark	43.2	(2.2)	42.0	(1.3)	50.7	(2.0)	58.1	(4.2)	40.1	(2.3)	30.1	(1.0)	31.2	(1.9)	34.0	(3.6)
	Finland	61.2	(4.9)	56.4	(1.3)	57.7	(2.0)	64.3	(1.9)	53.5	(4.4)	43.0	(1.4)	40.6	(1.7)	40.4	(1.7)
	France	50.7	(2.0)	58.7	(1.1)	70.1	(1.7)	71.2	(2.4)	41.7	(1.8)	28.3	(1.1)	24.7	(1.8)	28.0	(2.9)
	Germany	45.0	(2.0)	45.7	(1.3)	46.3	(2.4)	50.3	(2.2)	39.7	(2.3)	37.4	(1.4)	35.2	(2.0)	36.0	(2.5)
	Greece	61.8	(1.8)	67.8	(1.2)	72.6	(2.2)	71.5	(3.9)	52.7	(2.2)	47.5	(1.4)	44.7	(2.7)	46.2	(4.9)
	Hungary	52.3	(2.1)	54.5	(1.3)	57.7	(2.0)	61.7	(3.4)	45.8	(2.8)	39.3	(1.2)	38.7	(1.8)	39.8	(3.7)
	Iceland	36.9	(2.0)	50.5	(1.3)	64.2	(2.1)	74.0	(3.4)	30.7	(2.0)	32.6	(1.0)	38.2	(2.1)	41.4	(3.5)
	Ireland	52.3	(2.6)	48.3	(1.3)	49.5	(2.2)	56.5	(3.8)	42.0	(2.7)	33.2	(1.1)	32.3	(2.0)	35.8	(3.5)
	Italy	56.5	(1.5)	56.1	(1.3)	53.9	(1.5)	54.3	(2.5)	44.8	(1.3)	35.5	(0.8)	28.0	(1.1)	25.2	(2.6)
	Japan	32.6	(2.6)	30.6	(1.3)	32.5	(1.4)	36.3	(2.1)	32.6	(2.1)	27.1	(0.9)	24.2	(1.3)	21.8	(1.7)
	Korea	28.8	(2.4)	26.1	(1.3)	31.6	(1.7)	43.0	(4.0)	23.2	(2.2)	21.9	(1.0)	27.0	(1.4)	31.1	(3.1)
	Luxembourg	48.7	(1.9)	49.8	(1.3)	53.2	(1.9)	54.0	(3.6)	43.8	(1.5)	32.2	(1.1)	29.1	(2.0)	27.9	(2.9)
	Mexico	34.9	(1.2)	25.6	(1.3)	33.9	(4.0)	c	c	32.0	(1.1)	24.2	(0.9)	27.9	(2.4)	c	c
	Netherlands	36.3	(3.2)	29.0	(1.3)	31.8	(1.9)	44.7	(2.4)	37.3	(2.8)	27.7	(1.2)	26.7	(2.0)	35.3	(2.7)
	New Zealand	53.0	(2.4)	53.8	(1.3)	56.0	(1.8)	61.5	(2.1)	47.1	(2.3)	38.8	(1.3)	35.2	(1.9)	35.5	(1.9)
	Norway	46.8	(2.1)	43.8	(1.3)	45.4	(2.0)	57.1	(3.2)	42.1	(2.3)	32.9	(1.3)	30.5	(1.9)	35.0	(2.9)
	Poland	62.8	(2.2)	58.6	(1.3)	57.6	(2.0)	62.2	(3.0)	54.9	(2.5)	47.4	(1.2)	43.5	(1.7)	44.5	(3.2)
	Portugal	62.3	(1.7)	68.3	(1.3)	74.0	(2.1)	75.5	(3.4)	56.6	(1.9)	51.1	(1.2)	46.7	(2.9)	36.2	(5.9)
	Slovak Republic	48.2	(2.5)	42.8	(1.3)	38.9	(1.9)	41.2	(3.1)	45.6	(2.4)	38.6	(1.2)	37.3	(2.3)	39.1	(3.9)
	Spain	45.7	(1.9)	58.5	(1.3)	70.3	(1.6)	72.0	(2.7)	33.9	(1.7)	28.4	(0.7)	27.7	(1.4)	25.5	(2.5)
	Sweden	49.1	(2.7)	51.3	(1.3)	55.5	(2.2)	64.5	(3.5)	37.5	(2.4)	34.5	(1.4)	29.4	(1.6)	29.6	(2.7)
	Switzerland	47.6	(1.9)	46.9	(1.3)	49.5	(1.8)	56.6	(2.5)	43.8	(1.9)	36.9	(1.0)	35.8	(1.4)	35.2	(2.3)
	Turkey	50.9	(1.5)	63.1	(1.3)	82.9	(2.9)	c	c	48.1	(1.6)	50.3	(1.4)	66.6	(3.6)	c	c
	United Kingdom	48.3	(2.1)	49.5	(1.3)	48.2	(1.6)	58.8	(2.1)	43.7	(1.7)	37.7	(1.0)	30.9	(1.2)	34.2	(1.9)
	United States	62.3	(1.8)	59.9	(1.3)	59.4	(1.7)	59.6	(3.2)	59.1	(2.0)	50.4	(1.3)	45.4	(2.0)	44.6	(2.7)
	OECD average	49.6	(0.4)	49.8	(1.3)	52.9	(0.4)	58.1	(0.6)	43.4	(0.4)	36.2	(0.2)	34.0	(0.3)	34.5	(0.6)
Partners	Argentina	36.4	(1.4)	30.7	(1.3)	33.6	(5.3)	c	c	34.3	(1.7)	24.4	(1.6)	20.0	(4.5)	c	c
	Azerbaijan	61.7	(1.2)	68.0	(1.3)	c	c	c	c	50.4	(1.4)	51.7	(1.8)	c	c	c	c
	Brazil	62.0	(1.1)	55.6	(1.3)	63.6	(4.1)	c	c	54.0	(1.1)	46.4	(1.4)	48.6	(4.0)	c	c
	Bulgaria	60.8	(1.7)	62.8	(1.3)	64.0	(2.8)	63.5	(5.0)	57.3	(1.4)	56.6	(1.2)	54.5	(2.5)	51.8	(5.3)
	Chile	56.0	(1.4)	52.5	(1.3)	59.1	(3.3)	c	c	51.8	(1.3)	49.5	(1.3)	52.2	(3.2)	c	c
	Colombia	48.5	(2.0)	43.5	(1.3)	c	c	c	c	36.6	(2.0)	30.0	(2.0)	c	c	c	c
	Croatia	49.4	(1.8)	47.8	(1.3)	56.0	(1.8)	62.9	(3.5)	44.8	(2.1)	38.7	(0.9)	41.6	(1.8)	48.1	(4.1)
	Estonia	56.4	(3.8)	54.9	(1.3)	51.5	(2.0)	49.5	(2.6)	52.6	(3.3)	42.7	(1.2)	31.9	(1.7)	26.5	(2.2)
	Hong Kong-China	58.9	(4.2)	52.8	(1.3)	51.0	(1.5)	51.1	(1.8)	54.9	(3.3)	44.0	(1.3)	41.3	(1.6)	39.2	(2.0)
	Indonesia	66.2	(1.0)	64.6	(1.3)	c	c	c	c	59.1	(1.1)	52.9	(2.4)	c	c	c	c
	Israel	58.1	(1.6)	60.8	(1.3)	64.0	(2.6)	64.6	(4.3)	51.8	(1.5)	49.4	(1.4)	46.0	(2.3)	42.3	(3.9)
	Jordan	65.6	(1.4)	68.7	(1.3)	62.4	(3.2)	c	c	59.8	(1.3)	56.6	(1.3)	47.2	(3.8)	c	c
	Kyrgyzstan	68.7	(1.0)	70.5	(1.3)	c	c	c	c	54.4	(0.9)	57.5	(2.1)	c	c	c	c
	Latvia	57.7	(2.5)	54.9	(1.3)	54.4	(2.4)	56.7	(4.3)	52.8	(2.2)	40.4	(1.4)	31.8	(2.2)	30.1	(3.6)
	Liechtenstein	54.1	(7.8)	50.4	(1.3)	44.7	(5.8)	42.5	(9.4)	44.7	(7.9)	44.9	(3.6)	34.3	(5.9)	32.5	(10.1)
	Lithuania	59.2	(1.8)	64.4	(1.3)	65.8	(2.0)	70.6	(3.2)	45.8	(1.6)	39.0	(1.0)	36.6	(1.9)	36.3	(3.7)
	Macao-China	43.6	(2.8)	39.8	(1.3)	37.3	(2.2)	43.7	(5.5)	39.2	(2.9)	30.8	(0.9)	26.9	(2.0)	28.1	(4.3)
	Montenegro	54.8	(1.2)	47.2	(1.3)	43.2	(5.2)	c	c	45.3	(1.2)	38.6	(1.3)	35.0	(4.4)	c	c
	Qatar	64.1	(0.7)	73.0	(1.3)	c	c	c	c	58.7	(0.6)	58.3	(1.7)	c	c	c	c
	Romania	53.7	(2.0)	46.6	(1.3)	47.2	(4.7)	c	c	48.3	(1.4)	38.1	(1.5)	35.9	(4.7)	c	c
	Russian Federation	68.0	(1.5)	63.9	(1.3)	66.3	(2.8)	71.7	(3.4)	63.6	(1.9)	59.0	(1.2)	60.8	(2.9)	61.9	(4.4)
	Serbia	58.3	(1.2)	52.9	(1.3)	59.6	(3.3)	c	c	52.1	(1.2)	44.7	(0.9)	44.7	(3.6)	c	c
	Slovenia	54.8	(1.9)	48.3	(1.3)	49.8	(1.8)	51.8	(2.8)	49.1	(2.9)	38.7	(1.1)	35.4	(1.9)	34.2	(2.9)
	Chinese Taipei	41.4	(2.3)	38.5	(1.3)	36.1	(1.2)	37.5	(1.6)	34.0	(2.0)	30.0	(0.9)	31.9	(1.2)	36.6	(1.8)
	Thailand	62.2	(1.2)	62.1	(1.3)	71.8	(3.5)	c	c	52.4	(1.3)	46.2	(1.1)	52.5	(4.6)	c	c
	Tunisia	62.6	(1.2)	66.5	(1.3)	c	c	c	c	55.2	(1.1)	51.1	(1.6)	c	c	c	c
	Uruguay	49.2	(1.7)	50.5	(1.3)	59.9	(3.3)	c	c	38.1	(1.7)	29.0	(1.0)	26.3	(2.8)	c	c



[Part 1/4]

Table A3.15 Proportion of relatively unmotivated top performers and their characteristics, by country

		Relatively unmotivated top performers (top performers in science who reported motivation levels below the average motivation of science strong performers in the index of future-oriented science motivation)		PISA index of economic, social and cultural status					
				Relatively motivated top performers		Relatively unmotivated top performers		Difference in the index (motivated – unmotivated)	
		%	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	35.2	(1.30)	0.61	(0.03)	0.58	(0.03)	0.03	(0.04)
	Austria	37.6	(3.19)	0.66	(0.06)	0.53	(0.07)	0.12	(0.09)
	Belgium	31.9	(1.96)	0.78	(0.05)	0.67	(0.06)	0.11	(0.07)
	Canada	34.4	(1.61)	0.74	(0.03)	0.63	(0.04)	0.10	(0.05)
	Czech Republic	26.2	(2.25)	0.60	(0.04)	0.51	(0.07)	0.09	(0.07)
	Denmark	41.5	(3.85)	1.03	(0.08)	c	c	c	c
	Finland	23.8	(1.83)	0.60	(0.04)	0.47	(0.05)	**0.13**	(0.06)
	France	23.6	(2.28)	0.59	(0.06)	c	c	c	c
	Germany	43.6	(2.59)	0.92	(0.05)	0.88	(0.06)	0.04	(0.07)
	Greece	33.9	(4.83)	c	c	c	c	c	c
	Hungary	38.6	(3.44)	0.74	(0.07)	c	c	c	c
	Iceland	30.5	(3.76)	1.25	(0.08)	c	c	c	c
	Ireland	30.2	(2.88)	0.48	(0.06)	c	c	c	c
	Italy	37.9	(2.31)	c	c	c	c	c	c
	Japan	25.6	(1.67)	0.29	(0.03)	0.22	(0.05)	0.08	(0.05)
	Korea	30.1	(3.36)	0.44	(0.09)	0.42	(0.11)	0.02	(0.14)
	Luxembourg	38.8	(3.19)	0.92	(0.06)	c	c	c	c
	Mexico	c	c	c	c	c	c	c	c
	Netherlands	24.9	(2.18)	0.83	(0.03)	0.70	(0.07)	0.13	(0.08)
	New Zealand	33.0	(1.86)	0.61	(0.04)	0.52	(0.06)	0.09	(0.07)
	Norway	42.1	(3.39)	0.86	(0.08)	c	c	c	c
	Poland	42.8	(2.63)	0.44	(0.07)	c	c	c	c
	Portugal	28.3	(3.68)	c	c	c	c	c	c
	Slovak Republic	52.1	(3.09)	0.62	(0.09)	0.64	(0.08)	-0.02	(0.13)
	Spain	26.7	(2.04)	0.54	(0.09)	c	c	c	c
	Sweden	33.5	(2.73)	0.71	(0.05)	c	c	c	c
	Switzerland	27.4	(1.79)	0.71	(0.04)	c	c	c	c
	Turkey	c	c	c	c	c	c	c	c
	United Kingdom	38.5	(1.76)	0.69	(0.04)	0.68	(0.05)	0.01	(0.05)
	United States	37.2	(2.71)	0.84	(0.06)	0.74	(0.08)	0.10	(0.08)
	OECD average	33.9	(0.52)	0.66	(0.01)	0.58	(0.02)	0.07	(0.02)
Partners	Argentina	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c
	Bulgaria	48.4	(6.17)	c	c	c	c	c	c
	Chile	c	c	0.78	(0.16)	c	c	c	c
	Chinese Taipei	38.0	(1.92)	0.18	(0.03)	0.08	(0.04)	0.09	(0.05)
	Colombia	c	c	c	c	c	c	c	c
	Croatia	38.8	(3.55)	0.63	(0.08)	c	c	c	c
	Estonia	29.9	(2.43)	0.65	(0.05)	0.48	(0.08)	**0.17**	(0.08)
	Hong Kong-China	39.0	(1.58)	-0.32	(0.07)	-0.32	(0.07)	0.00	(0.07)
	Indonesia	c	c	c	c	c	c	c	c
	Israel	41.1	(3.31)	0.80	(0.06)	c	c	c	c
	Jordan	c	c	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c
	Latvia	48.2	(5.08)	c	c	c	c	c	c
	Liechtenstein	32.5	(9.41)	0.89	(0.17)	0.43	(0.24)	0.46	(0.30)
	Lithuania	41.1	(3.70)	c	c	c	c	c	c
	Macao-China	37.5	(4.82)	-0.54	(0.10)	c	c	c	c
	Montenegro	c	c	c	c	c	c	c	c
	Qatar	c	c	c	c	c	c	c	c
	Romania	c	c	c	c	c	c	c	c
	Russian Federation	45.0	(3.77)	c	c	c	c	c	c
	Serbia	c	c	c	c	c	c	c	c
	Slovenia	40.2	(2.93)	0.77	(0.05)	0.66	(0.07)	0.12	(0.08)
	Thailand	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

TOP OF THE CLASS – HIGH PERFORMERS IN SCIENCE IN PISA 2006 – ISBN 978-92-64-06068-5 – © OECD 2009



[Part 2/4]

Table A3.15 Proportion of relatively unmotivated top performers and their characteristics, by country

		Gender (% males)						Hours per week taking science lessons in school					
		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the percentage (motivated – unmotivated)		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the mean hours (motivated – unmotivated)	
		%	S.E.	%	S.E.	Dif.	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.
OECD	Australia	56.0	(3.0)	52.1	(3.8)	4.0	(3.3)	4.5	(0.1)	3.6	(0.1)	**0.8**	(0.1)
	Austria	60.7	(3.8)	52.5	(5.1)	8.2	(5.6)	4.1	(0.2)	3.3	(0.2)	**0.9**	(0.2)
	Belgium	64.5	(2.5)	44.6	(3.8)	**19.9**	(4.2)	4.3	(0.1)	3.2	(0.1)	**1.1**	(0.2)
	Canada	55.9	(2.0)	52.3	(3.7)	3.5	(4.2)	5.0	(0.1)	4.6	(0.2)	**0.5**	(0.2)
	Czech Republic	55.4	(3.3)	65.3	(5.2)	**-10.0**	(5.0)	5.2	(0.1)	4.3	(0.2)	**0.9**	(0.3)
	Denmark	54.4	(5.2)	c	c	c	c	3.9	(0.1)	c	c	c	c
	Finland	51.4	(2.2)	51.0	(3.3)	0.4	(3.8)	3.9	(0.1)	3.5	(0.1)	**0.4**	(0.1)
	France	63.6	(4.0)	c	c	c	c	5.1	(0.1)	c	c	c	c
	Germany	63.6	(3.0)	54.6	(4.5)	9.0	(4.8)	4.6	(0.1)	4.3	(0.2)	0.3	(0.2)
	Greece	c	c	c	c	c	c	c	c	c	c	c	c
	Hungary	64.9	(4.8)	c	c	c	c	4.2	(0.2)	c	c	c	c
	Iceland	53.8	(5.0)	c	c	c	c	3.5	(0.1)	c	c	c	c
	Ireland	51.0	(3.5)	c	c	c	c	3.3	(0.1)	c	c	c	c
	Italy	c	c	c	c	c	c	c	c	c	c	c	c
	Japan	60.2	(3.0)	45.5	(4.8)	**14.8**	(4.4)	3.2	(0.1)	3.1	(0.1)	0.1	(0.1)
	Korea	59.0	(4.4)	43.9	(5.7)	**15.1**	(5.6)	4.2	(0.3)	3.6	(0.2)	0.6	(0.3)
	Luxembourg	65.8	(4.1)	c	c	c	c	3.4	(0.2)	c	c	c	c
	Mexico	c	c	c	c	c	c	c	c	c	c	c	c
	Netherlands	61.8	(2.4)	46.5	(5.6)	**15.3**	(6.7)	4.0	(0.1)	2.3	(0.2)	**1.7**	(0.2)
	New Zealand	52.2	(3.7)	47.2	(4.5)	5.0	(4.2)	5.2	(0.1)	4.5	(0.1)	**0.7**	(0.1)
	Norway	58.9	(5.6)	c	c	c	c	2.9	(0.1)	c	c	c	c
	Poland	54.4	(4.2)	c	c	c	c	3.7	(0.1)	c	c	c	c
	Portugal	c	c	c	c	c	c	c	c	c	c	c	c
	Slovak Republic	63.0	(5.5)	57.1	(5.6)	5.9	(8.3)	5.0	(0.2)	4.4	(0.2)	**0.6**	(0.2)
	Spain	59.6	(3.3)	c	c	c	c	5.1	(0.1)	c	c	c	c
	Sweden	60.0	(3.8)	c	c	c	c	3.1	(0.1)	c	c	c	c
	Switzerland	58.4	(2.4)	c	c	c	c	4.1	(0.1)	c	c	c	c
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	61.0	(2.7)	52.6	(3.0)	**8.3**	(3.4)	5.4	(0.1)	5.0	(0.1)	**0.4**	(0.1)
	United States	59.3	(3.9)	48.8	(4.9)	10.5	(6.1)	4.8	(0.1)	4.5	(0.2)	**0.4**	(0.2)
	OECD average	58.9	(0.9)	51.0	(1.2)	7.8	(1.4)	4.5	(0.0)	3.9	(0.0)	0.7	(0.1)
Partners	Argentina	c	c	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Chile	65.8	(11.0)	c	c	c	c	4.2	(0.3)	c	c	c	c
	Chinese Taipei	67.2	(4.2)	39.1	(3.6)	**28.1**	(3.3)	3.9	(0.1)	3.5	(0.1)	**0.4**	(0.1)
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	54.8	(4.4)	c	c	c	c	3.0	(0.2)	c	c	c	c
	Estonia	52.0	(3.3)	53.8	(5.1)	-1.8	(6.3)	4.6	(0.1)	4.5	(0.1)	0.0	(0.2)
	Hong Kong-China	59.7	(4.1)	46.1	(4.2)	**13.6**	(4.1)	5.7	(0.1)	3.7	(0.2)	**2.0**	(0.2)
	Indonesia	c	c	c	c	c	c	c	c	c	c	c	c
	Israel	65.8	(4.3)	c	c	c	c	4.4	(0.2)	c	c	c	c
	Jordan	c	c	c	c	c	c	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c	c	c	c	c
	Liechtenstein	50.4	(10.0)	36.6	(14.4)	13.7	(17.4)	4.4	(0.4)	3.6	(0.6)	0.7	(0.7)
	Lithuania	45.5	(4.0)	c	c	c	c	3.7	(0.2)	c	c	c	c
	Macao-China	c	c	c	c	c	c	c	c	c	c	c	c
	Montenegro	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	c	c	c	c	c	c	c	c	c	c	c	c
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	c	c	c	c	c	c	c	c	c	c	c	c
	Serbia	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	52.5	(3.6)	43.5	(5.1)	9.0	(5.7)	4.6	(0.1)	4.1	(0.2)	0.4	(0.2)
	Thailand	c	c	c	c	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

TOP OF THE CLASS – HIGH PERFORMERS IN SCIENCE IN PISA 2006 – ISBN 978-92-64-06068-5 – © OECD 2009



[Part 3/4]

Table A3.15 Proportion of relatively unmotivated top performers and their characteristics, by country

		Index of enjoyment of science						Index of students' science-related activities					
		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the index (motivated – unmotivated)		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the index (motivated – unmotivated)	
		%	S.E.	%	S.E.	Dif.	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.
OECD	Australia	1.03	(0.03)	0.05	(0.05)	**0.98**	(0.05)	0.50	(0.03)	-0.21	(0.05)	**0.71**	(0.05)
	Austria	0.97	(0.07)	-0.35	(0.07)	**1.33**	(0.09)	0.74	(0.05)	-0.03	(0.07)	**0.77**	(0.09)
	Belgium	0.93	(0.03)	0.00	(0.07)	**0.93**	(0.07)	0.68	(0.03)	0.13	(0.07)	**0.55**	(0.07)
	Canada	1.19	(0.03)	0.17	(0.05)	**1.02**	(0.07)	0.54	(0.03)	-0.16	(0.06)	**0.70**	(0.07)
	Czech Republic	0.57	(0.04)	-0.37	(0.09)	**0.94**	(0.09)	0.51	(0.05)	-0.20	(0.08)	**0.71**	(0.08)
	Denmark	1.14	(0.06)	c	c	c	c	0.72	(0.06)	c	c	c	c
	Finland	0.74	(0.03)	-0.11	(0.06)	**0.85**	(0.07)	0.32	(0.03)	-0.27	(0.05)	**0.60**	(0.06)
	France	1.18	(0.05)	c	c	c	c	0.70	(0.05)	c	c	c	c
	Germany	1.11	(0.05)	0.06	(0.07)	**1.05**	(0.09)	0.76	(0.04)	0.23	(0.07)	**0.53**	(0.07)
	Greece	c	c	c	c	c	c	c	c	c	c	c	c
	Hungary	1.04	(0.07)	c	c	c	c	0.97	(0.06)	c	c	c	c
	Iceland	1.33	(0.06)	c	c	c	c	0.76	(0.06)	c	c	c	c
	Ireland	0.90	(0.05)	c	c	c	c	0.32	(0.05)	c	c	c	c
	Italy	c	c	c	c	c	c	c	c	c	c	c	c
	Japan	0.62	(0.04)	-0.31	(0.08)	**0.93**	(0.08)	-0.04	(0.04)	-0.76	(0.06)	**0.71**	(0.08)
	Korea	0.92	(0.05)	-0.09	(0.08)	**1.01**	(0.10)	0.54	(0.08)	-0.21	(0.08)	**0.75**	(0.11)
	Luxembourg	1.15	(0.08)	c	c	c	c	0.89	(0.05)	c	c	c	c
	Mexico	c	c	c	c	c	c	c	c	c	c	c	c
	Netherlands	0.55	(0.05)	-0.49	(0.07)	**1.04**	(0.08)	0.36	(0.04)	-0.32	(0.07)	**0.68**	(0.08)
	New Zealand	0.95	(0.04)	-0.02	(0.06)	**0.97**	(0.08)	0.43	(0.04)	-0.24	(0.05)	**0.67**	(0.07)
	Norway	1.26	(0.07)	c	c	c	c	0.76	(0.06)	c	c	c	c
	Poland	0.68	(0.06)	c	c	c	c	1.09	(0.05)	c	c	c	c
	Portugal	c	c	c	c	c	c	c	c	c	c	c	c
	Slovak Republic	0.80	(0.08)	-0.10	(0.07)	**0.90**	(0.09)	0.76	(0.07)	0.16	(0.07)	**0.60**	(0.09)
	Spain	0.91	(0.06)	c	c	c	c	0.54	(0.05)	c	c	c	c
	Sweden	1.09	(0.06)	c	c	c	c	0.33	(0.07)	c	c	c	c
	Switzerland	1.05	(0.05)	c	c	c	c	0.67	(0.03)	c	c	c	c
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	0.92	(0.03)	-0.01	(0.05)	**0.93**	(0.05)	0.44	(0.05)	-0.27	(0.05)	**0.70**	(0.08)
	United States	1.09	(0.05)	-0.02	(0.09)	**1.11**	(0.09)	0.64	(0.05)	-0.10	(0.08)	**0.75**	(0.09)
	OECD average	0.89	(0.01)	-0.11	(0.02)	1.00	(0.02)	0.51	(0.01)	-0.16	(0.02)	0.67	(0.02)
Partners	Argentina	c	c	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Chile	1.24	(0.11)	c	c	c	c	0.90	(0.10)	c	c	c	c
	Chinese Taipei	0.98	(0.03)	0.01	(0.05)	**0.97**	(0.05)	0.92	(0.03)	0.28	(0.04)	**0.64**	(0.05)
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	0.77	(0.07)	c	c	c	c	0.95	(0.06)	c	c	c	c
	Estonia	0.62	(0.05)	-0.18	(0.06)	**0.80**	(0.08)	0.72	(0.04)	0.05	(0.07)	**0.67**	(0.09)
	Hong Kong-China	1.16	(0.04)	0.41	(0.04)	**0.75**	(0.06)	0.97	(0.04)	0.31	(0.05)	**0.65**	(0.06)
	Indonesia	c	c	c	c	c	c	c	c	c	c	c	c
	Israel	0.96	(0.10)	c	c	c	c	0.56	(0.10)	c	c	c	c
	Jordan	c	c	c	c	c	c	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c	c	c	c	c
	Liechtenstein	0.82	(0.19)	-0.43	(0.34)	**1.25**	(0.39)	0.36	(0.20)	-0.31	(0.24)	**0.68**	(0.33)
	Lithuania	0.99	(0.08)	c	c	c	c	0.64	(0.07)	c	c	c	c
	Macao-China	c	c	c	c	c	c	c	c	c	c	c	c
	Montenegro	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	c	c	c	c	c	c	c	c	c	c	c	c
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	c	c	c	c	c	c	c	c	c	c	c	c
	Serbia	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.68	(0.07)	-0.50	(0.07)	**1.17**	(0.10)	1.04	(0.05)	0.30	(0.07)	**0.74**	(0.09)
	Thailand	c	c	c	c	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).



[Part 4/4]

Table A3.15 Proportion of relatively unmotivated top performers and their characteristics, by country

		Index of school preparation for science-related careers						Index of student information on science-related careers					
		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the index (motivated – unmotivated)		Relatively motivated top performers		Relatively unmotivated top performers		Difference in the index (motivated – unmotivated)	
		Mean index	S.E.	Mean index	S.E.	Dif.	S.E.	Mean index	S.E.	Mean index	S.E.	Dif.	S.E.
OECD	Australia	0.98	(0.04)	0.31	(0.04)	**0.67**	(0.05)	0.64	(0.04)	0.17	(0.05)	**0.47**	(0.07)
	Austria	0.35	(0.07)	-0.41	(0.11)	**0.76**	(0.11)	0.12	(0.07)	-0.35	(0.09)	**0.47**	(0.12)
	Belgium	0.45	(0.05)	-0.15	(0.07)	**0.61**	(0.09)	-0.12	(0.04)	-0.40	(0.06)	**0.28**	(0.08)
	Canada	0.92	(0.04)	0.38	(0.05)	**0.53**	(0.06)	0.60	(0.04)	0.13	(0.06)	**0.46**	(0.07)
	Czech Republic	0.22	(0.05)	-0.29	(0.09)	**0.51**	(0.10)	0.14	(0.04)	-0.52	(0.08)	**0.66**	(0.08)
	Denmark	0.58	(0.07)	c	c	c	c	0.35	(0.09)	c	c	c	c
	Finland	0.38	(0.05)	0.26	(0.07)	0.11	(0.08)	0.32	(0.04)	-0.14	(0.07)	**0.46**	(0.09)
	France	0.86	(0.07)	c	c	c	c	0.34	(0.07)	c	c	c	c
	Germany	0.42	(0.08)	0.17	(0.09)	**0.25**	(0.12)	0.32	(0.05)	-0.10	(0.07)	**0.42**	(0.07)
	Greece	c	c	c	c	c	c	c	c	c	c	c	c
	Hungary	0.41	(0.10)	c	c	c	c	0.20	(0.07)	c	c	c	c
	Iceland	0.67	(0.09)	c	c	c	c	0.42	(0.08)	c	c	c	c
	Ireland	0.74	(0.05)	c	c	c	c	0.37	(0.07)	c	c	c	c
	Italy	c	c	c	c	c	c	c	c	c	c	c	c
	Japan	-0.10	(0.07)	-0.52	(0.09)	**0.43**	(0.11)	-0.25	(0.04)	-0.60	(0.08)	**0.34**	(0.08)
	Korea	-0.05	(0.11)	-0.58	(0.08)	**0.53**	(0.14)	0.04	(0.07)	-0.45	(0.08)	**0.49**	(0.10)
	Luxembourg	0.12	(0.12)	c	c	c	c	0.15	(0.10)	c	c	c	c
	Mexico	c	c	c	c	c	c	c	c	c	c	c	c
	Netherlands	0.36	(0.04)	-0.46	(0.07)	**0.82**	(0.09)	0.14	(0.05)	-0.52	(0.09)	**0.65**	(0.11)
	New Zealand	0.89	(0.04)	0.26	(0.06)	**0.63**	(0.07)	0.48	(0.05)	-0.01	(0.05)	**0.50**	(0.07)
	Norway	0.17	(0.09)	c	c	c	c	0.22	(0.08)	c	c	c	c
	Poland	0.15	(0.07)	c	c	c	c	0.53	(0.08)	c	c	c	c
	Portugal	c	c	c	c	c	c	c	c	c	c	c	c
	Slovak Republic	0.30	(0.12)	-0.19	(0.11)	**0.48**	(0.15)	0.24	(0.09)	-0.24	(0.09)	**0.48**	(0.13)
	Spain	0.55	(0.06)	c	c	c	c	0.36	(0.05)	c	c	c	c
	Sweden	0.41	(0.09)	c	c	c	c	0.05	(0.08)	c	c	c	c
	Switzerland	0.72	(0.06)	c	c	c	c	0.31	(0.05)	c	c	c	c
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	0.97	(0.03)	0.38	(0.07)	**0.59**	(0.07)	0.35	(0.05)	-0.12	(0.07)	**0.46**	(0.08)
	United States	0.87	(0.06)	0.33	(0.08)	**0.54**	(0.11)	0.57	(0.08)	0.17	(0.09)	**0.40**	(0.11)
	OECD average	0.50	(0.02)	-0.04	(0.02)	0.53	(0.03)	0.26	(0.02)	-0.21	(0.02)	0.47	(0.02)
Partners	Argentina	c	c	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Chile	0.79	(0.15)	c	c	c	c	0.54	(0.12)	c	c	c	c
	Chinese Taipei	0.42	(0.04)	0.05	(0.05)	**0.37**	(0.07)	0.34	(0.04)	0.04	(0.04)	**0.30**	(0.05)
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	0.45	(0.09)	c	c	c	c	0.45	c	c	c	c	c
	Estonia	0.44	(0.05)	0.15	(0.07)	**0.30**	(0.09)	-0.04	(0.05)	-0.45	(0.06)	**0.42**	(0.06)
	Hong Kong-China	0.26	(0.07)	-0.32	(0.06)	**0.58**	(0.08)	0.34	(0.04)	0.12	(0.06)	**0.22**	(0.07)
	Indonesia	c	c	c	c	c	c	c	c	c	c	c	c
	Israel	0.27	(0.13)	c	c	c	c	0.56	(0.09)	c	c	c	c
	Jordan	c	c	c	c	c	c	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c	c	c	c	c
	Liechtenstein	0.81	(0.23)	0.05	(0.30)	**0.76**	(0.36)	0.15	(0.20)	-0.53	(0.30)	**0.68**	(0.34)
	Lithuania	0.78	(0.07)	c	c	c	c	0.45	(0.08)	c	c	c	c
	Macao-China	c	c	c	c	c	c	c	c	c	c	c	c
	Montenegro	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	c	c	c	c	c	c	c	c	c	c	c	c
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	c	c	c	c	c	c	c	c	c	c	c	c
	Serbia	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.46	(0.06)	-0.08	(0.07)	**0.54**	(0.10)	0.21	(0.05)	-0.18	(0.08)	**0.39**	(0.08)
	Thailand	c	c	c	c	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex B).

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Appendix B

STANDARD ERRORS, SIGNIFICANCE TESTS AND SUBGROUP COMPARISONS

The statistics in this report represent estimates of national performance based on samples of students rather than values that could be calculated if every student in every country had answered every question. Consequently, it is important to have measures of the degree of uncertainty of the estimates. In PISA, each estimate has an associated degree of uncertainty, which is expressed through a standard error. The use of confidence intervals provides a way to make inferences about the population means and proportions in a manner that reflects the uncertainty associated with the sample estimates. From an observed sample statistic it can, under the assumption of a normal distribution, be inferred that the corresponding population result would lie within the confidence interval in 95 out of 100 replications of the measurement on different samples drawn from the same population.

In many cases, readers are primarily interested in whether a given value in a particular country is different from a second value in the same or another country, *e.g.* whether females in a country perform better than males in the same country. In the tables and charts used in this report, differences are labelled as statistically significant when a difference of that size, smaller or larger, would be observed less than 5% of the time, if there was actually no difference in corresponding population values. Similarly, the risk of reporting a correlation as significant if there is, in fact, no correlation between two measures, is contained at 5%.

Throughout the report, significance tests were undertaken to assess the statistical significance of the comparisons made between strong performers and top performers, between males and females, between students with an immigrant background and native students, between students who do not speak the language of assessment at home and students who do, between students in private schools and students in public schools, and between unmotivated top performers and motivated top performers.

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Top of the Class

HIGH PERFORMERS IN SCIENCE IN PISA 2006

The rapidly growing demand for highly skilled workers has led to a global competition for talent. While basic competencies are important for the absorption of new technologies, high-level skills are critical for the creation of new knowledge, technologies and innovation. For countries near the technology frontier, this implies that the share of highly educated workers in the labour force is an important determinant of economic growth and social development. There is also mounting evidence that individuals with high-level skills generate relatively large externalities in knowledge creation and utilisation, compared to an "average" individual, which in turn suggests that investing in excellence may benefit all. Educating for excellence is thus an important policy goal.

The OECD's Programme for International Student Assessment (PISA) has taken an innovative approach to examining educational excellence, by directly assessing students' knowledge, skills and attitudes and exploring how these relate to the characteristics of individual students, schools and education systems. The development of this report was guided by three areas of interest:

- Who are the students who meet the highest performance standards? What types of families and communities do these students come from?
- What are the characteristics of the schools that they are attending? What kinds of instructional experiences are provided to them in science? How often do they engage in science-related activities outside of school?
- What motivations drive them in their study of science? What are their attitudes towards science and what are their intentions regarding science-related careers?

FURTHER READING

The first results from PISA 2006 were published in *PISA 2006: Science Competencies for Tomorrow's World* (OECD, 2007)

THE OECD PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT (PISA)

PISA is a collaborative process among the 30 member countries of the OECD and nearly 30 partner countries and economies. It brings together expertise from the participating countries and economies and is steered by their governments on the basis of shared, policy-driven interests. Its unique features include:

- *The literacy approach:* PISA defines each assessment area (science, reading and mathematics) not mainly in terms of mastery of the school curriculum, but in terms of the knowledge and skills needed for full participation in society.
- *A long-term commitment:* It enables countries to monitor regularly and predictably their progress in meeting key learning objectives.
- *The age-group covered:* By assessing 15-year-olds, *i.e.* young people near the end of their compulsory education, PISA provides a significant indication of the overall performance of school systems.
- *The relevance to lifelong learning:* PISA does not limit itself to assessing students' knowledge and skills but also asks them to report on their own motivation to learn, their beliefs about themselves and their learning strategies, as well as on their goals for future study and careers.

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