Outside the Box: Canadian Results of the OECD PISA 2022 Study

The Performance of Canadian 15-Year-Olds in Creative Thinking

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The Performance of Canadian 15-Year-Olds in Creative Thinking

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Note of appreciation

The Council of Ministers of Education, Canada (CMEC) would like to thank the students, teachers, and administrators whose participation in the Programme for International Student Assessment (PISA™) ensured its success. The quality of your efforts has deepened our understanding of the knowledge and skills among youth aged 15 in creative thinking, which has ultimately shed light on educational policies and practices across Canada. We are especially grateful for your contribution to this study in the turbulent context of the COVID-19 pandemic.

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Introduction

The ability to create has always been a propelling force in the advancement of humankind. Everything from culture to technology, society, the economy, and, above all, our survival has depended on humans' capacity for creative thinking and innovation in response to challenges.

Today, rapid advances in technology and dramatic changes in environmental, economic, and social conditions around the world make it difficult to predict what the future will look like for younger generations. As we look ahead to a future that has more questions than answers, amidst a rapidly changing landscape, it is crucial to consider how education systems are supporting the development of creative thinking skills among generations of young people.

Around the world, education systems are tasked with the responsibility of equipping students with the skills, competencies, and knowledge they need to be successful in the future. To ensure the effectiveness of these systems, it is important to periodically measure, assess, and evaluate students' performance across a range of core domains. For this reason, member countries of the Organisation for Economic Co-operation and Development (OECD), along with partner countries and economies,[1] developed the Programme for International Student Assessment (PISA™).

The Programme for International Student Assessment

PISA is a collaborative effort among member countries of the OECD. The assessment is designed with two overarching objectives: to provide policy-oriented international indicators of the skills and knowledge of 15-year-old students; and to deliver insights about a range of factors that contribute to successful students, schools, education systems, and learning environments (OECD, 2023b). PISA focuses on the capabilities of students as they near the end of compulsory education. Overall, it measures skills that are generally recognized as key outcomes of the educational process and that are believed to be prerequisites for efficient learning throughout life and for full participation in society. The assessment does not focus on whether students can reproduce knowledge but rather on their ability to use their knowledge and skills to meet real-life challenges. In Canada, PISA is carried out through a partnership between Employment and Social Development Canada (ESDC) and the Council of Ministers of Education, Canada (CMEC).

Since 2000, PISA has brought significant attention to international assessments and related studies by generating data to inform the public and to enhance policy-makers' ability to formulate decisions based on evidence, set measurable benchmarks, and monitor changes over time.[2] Canadian provinces have used information gathered from PISA, along with other sources of information such as the Pan-Canadian Assessment Program (PCAP), other international assessments, and their own provincial assessment programs, to inform various education-related initiatives.

PISA reports on mathematical, reading, and scientific literacy. Each cycle focuses on one of these three core domains, which is known as the major domain in that cycle. The major domain in 2022 was mathematics, as it was in 2003 and 2012. Around 690,000 students from 81 countries participated in the assessment of mathematics, reading, and science in PISA 2022. Typically, between 5,000 and 10,000 15-year-old students

[1] In this report, the word "countries" will be used to denote countries and economies.

[2] PISA has been administered every three years since 2000. The eighth cycle of PISA was scheduled to be administered in 2021. However, due to the global COVID-19 pandemic, the eighth cycle was rescheduled to 2022. Beginning in 2029, PISA will be switching to a four-year cycle (OECD, 2023d).

from at least 150 schools are tested in each country. In Canada, approximately 23,000 students from over 850 schools across the 10 provinces participated in PISA 2022.[3] An overview of PISA and more information on the core domain results for Canadian students in the 2022 cycle can be found in the main report, *Measuring Up: Canadian Results of the OECD PISA 2022 Study — The Performance of Canadian 15-Year-Olds in Mathematics, Reading, and Science* (Elez et al., 2023).

In addition to the three core domains, students' proficiency in a different innovative domain is assessed in each cycle. In PISA 2022, the innovative domain was creative thinking — that is, students' ability to generate diverse and creative ideas, as well as to evaluate and improve their ideas and those of others. The innovative domain in 2018 was global competence, while in 2015 it was collaborative problem solving. Of the 81 countries that participated in PISA 2022 for the three core domains (mathematics, reading, and science), 64 took part in the creative thinking assessment; of these, 28 are OECD member countries.[4] In Canada, all 10 provinces participated in the creative thinking assessment.

Note on PISA 2022

It should be noted that the PISA 2022 cycle was administered in schools during the time of the global pandemic. Many schools and students around the world were impacted by COVID-19–related restrictions, school closures, disruptions to learning environments, and changes in attendance and student learning modes.

In Canada and in certain other participating countries, these circumstances had impacts on school and student participation rates. Given that it did not meet all PISA technical standards, Canada was required to conduct a non-response bias analysis (NRBA) at the school and student levels for certain provinces. Based on the NRBA, the PISA international consortium judged that the Canadian data overall were of suitable quality to be included fully in the PISA data sets. However, the results for Canada overall, as well as for Newfoundland and Labrador, Nova Scotia, Quebec, Ontario, Manitoba, Alberta, and British Columbia are to be treated with caution because of a possible non-response bias at the student level, and are annotated accordingly in all international regional analyses and national reporting. More details on response and exclusion rates and the NRBA in Canada are provided in Appendix A of the 2022 PISA Canadian report (Elez et al., 2023). The Reader's Guide section of volume 1 of the 2022 PISA international report (OECD, 2023b) also contains further information on response and exclusion rates, and NRBAs at the international level.

What is creative thinking?

Broadly speaking, researchers understand creativity as the interaction between knowledge, skills, thinking process, and environment, leading to an output that is both useful and novel relative to its social context (OECD, 2023a). This balance between utility and novelty is important to underscore because creativity is not random; rather, it is characterized by a combination of its uniqueness alongside its capacity to respond and be applied to a specific environment or situation.

Creativity is often categorized as "big-C" or "little-c." Big-C creativity "is associated with intellectual or technological breakthroughs or literary or artistic masterpieces" that generate much attention or praise from society (OECD, 2024, p. 47). In contrast, little-c creativity is associated with everyday acts of innovation, such as cooking a meal with an atypical combination of ingredients (Kaufman & Beghetto, 2009). Since "big-C" creativity is rare and difficult to achieve, the PISA 2022 creative thinking assessment focuses on evaluating

[3] No data were collected in the three territories or in First Nations schools. Further information on sampling procedures and response rates for Canada can be found in the main PISA report (Elez et al., 2023).

[4] The following 28 OECD countries participated in the PISA 2022 creative thinking assessment: Australia, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Israel, Italy, Korea, Latvia, Lithuania, Mexico, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, and Spain.

"little-c" creativity among 15-year-old students in an effort to examine students' ability to generate new ideas that demonstrate both originality and relevance and, where necessary, to evaluate and improve on their own ideas.

In PISA 2022, "creative thinking" is defined as "the competence to engage productively in the generation, evaluation and improvement of ideas that can result in original and effective solutions, advances in knowledge and impactful expressions of imagination" (OECD, 2024, p. 47).

Crucially, little-c creativity "can be developed through practice and honed through education" (OECD, 2024, p. 47).

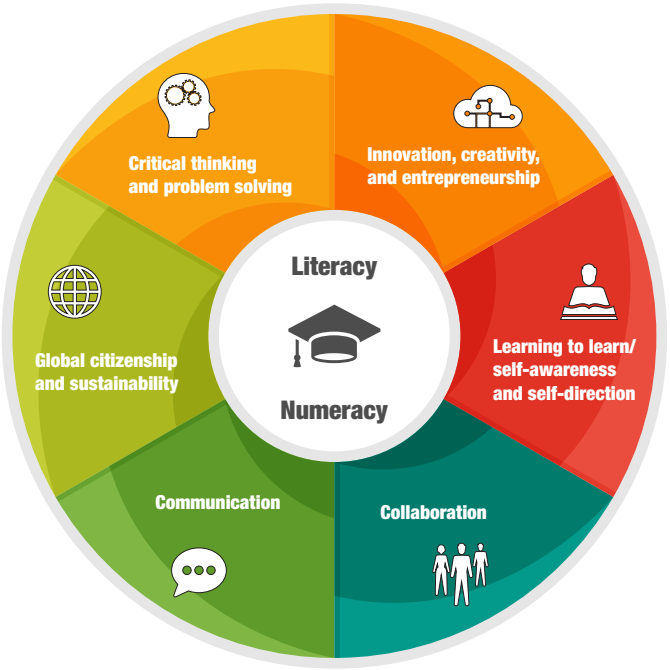
The importance of creative thinking

Education systems understand that, although mathematical, reading, and scientific literacy develop foundational knowledge, global competencies such as communication, collaboration, critical thinking, problem solving, and creativity are essential for young people if they are to respond successfully to new and complex environmental, economic, and social challenges. In fact, recent research on the future of jobs found that creativity is the second most important skill for workers, outranked only by analytical thinking (World Economic Forum, 2023).

In 2016, ministers of education from across Canada endorsed six broad global competencies to be fostered among students to help them prepare for the future (see Figure I.1). Included in this set is the competency of "innovation, creativity, and entrepreneurship," which is recognized for its capacity to "turn ideas into action to meet the needs of a community" (CMEC, 2018, p. 7). The conception of an international assessment tool for creative thinking not only provides countries and policy-makers with insights on the progress of their education systems, but it also contributes to a broader conversation about the intrinsic value of creative thinking and how its development can be better supported (OECD, 2023a).

Figure I.1

Pan-Canadian global competencies



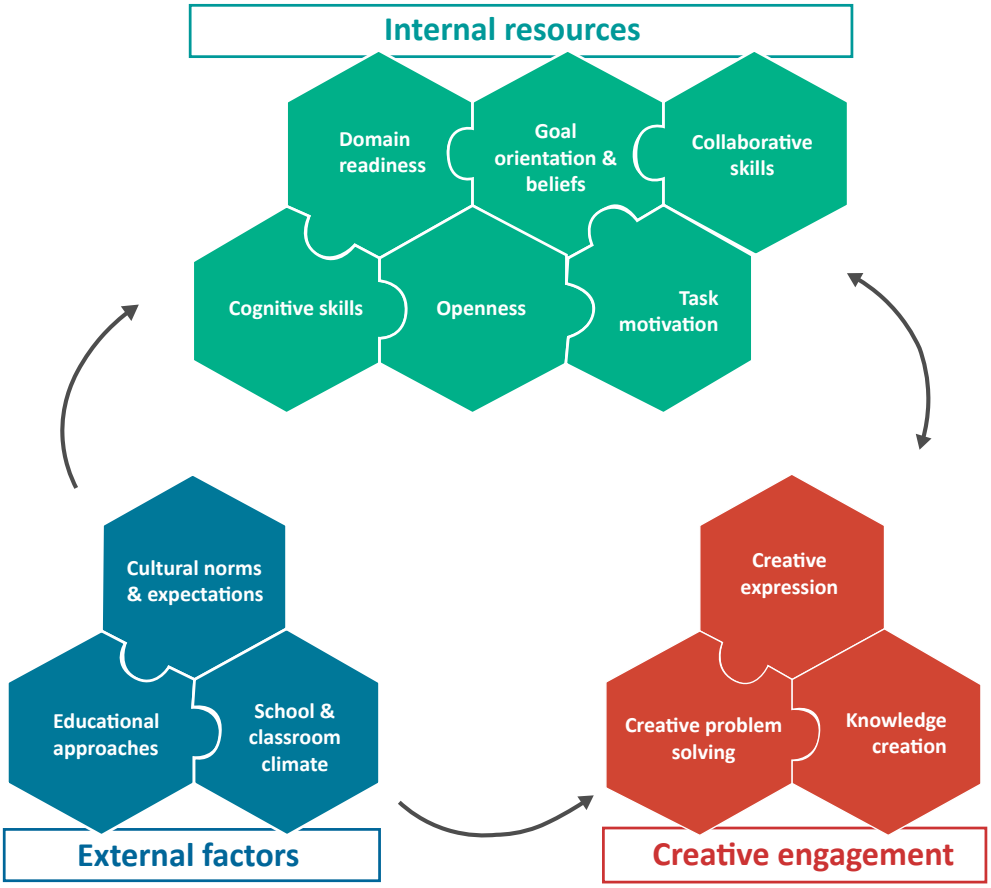
Source: CMEC (2018, p. 2).

The creative thinking assessment framework

Creative thinking can be understood as an interconnected web of various types of knowledge, skills, and attitudes. The PISA 2022 creative thinking assessment framework identifies six "internal resources" for fostering creative thinking in students: cognitive skills; domain readiness; openness to experience and intellect; collaboration; goal orientation and creative self-beliefs; and task motivation (OECD, 2023a). In addition to these internal resources are three "external factors": cultural norms and expectations; educational approaches; and school and classroom climate. The third part of the creative thinking framework is "creative engagement." This refers to the ways in which creative thinking is exercised or demonstrated by students in the classroom, through their creative problem solving, knowledge creation, and creative expression abilities. As depicted in Figure I.2, all three of these overarching elements are connected to one another. Building on this framework, the PISA 2022 assessment of creative thinking aims not to identify exceptionally creative individuals but instead to describe, in as much detail as possible, the extent to which students can think creatively when forming and communicating ideas (OECD, 2023a).

Figure I.2

Internal resources, external factors, and types of creative engagement



Source: OECD (2023a, p. 145).

The four domains of creative thinking

While there are many domains in which creative thinking can be assessed, PISA 2022 focuses on the following four distinct areas, as most appropriate for 15-year-olds engaging in creative thinking:

- *Written expression:* Students express imaginative ideas using written language through tasks such as creating captions for an illustration, coming up with a slogan for a product, or constructively improving someone else's written work.
- *Visual expression:* Students use digital design tools to complete visual design tasks such as creating a poster or flyer for an event or improving someone else's visual work.
- *Social problem solving:* Students come up with solutions for interpersonal and social issues or propose original ways to improve an existing solution, such as proposing ideas on how to save water, then strategizing diverse communication methods to share these water-saving activity ideas with different groups of people.
- *Scientific problem solving:* Students solve problems by generating new ideas, designing experiments or hypotheses, or coming up with new methods or inventions in a scientific context (e.g., inventing a product to address an issue, formulating a theory to explain a phenomenon, or making inferences about a dataset).

Additional constraints that influenced the choice of these four domains were the length of the test (60 minutes for the innovative domain); the age of the target population (the domains selected had to be familiar to most 15-year-old students across countries and reflect realistic ways in which students could demonstrate creative thinking in a test environment); and the testing platform technology (a computer desktop with no internet connection or touchscreen). Despite these constraints, the four assessment domains for creative thinking provide "reasonable and sufficiently diverse" coverage of the types of creative thinking activities common among 15-year-olds across the world (OECD, 2023a, p. 152).

The competency model of creative thinking

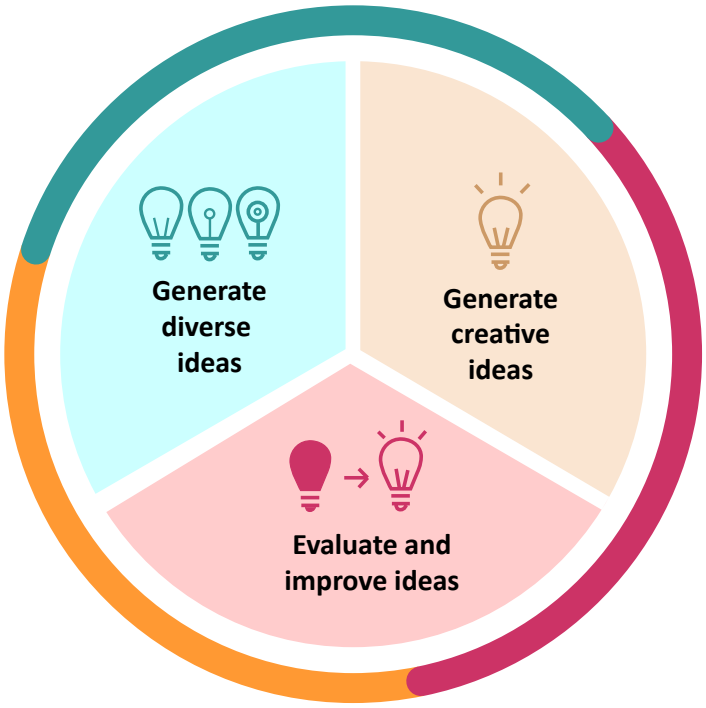
In PISA 2022, creative thinking is measured based on a competency model that assesses the following three facets or ideation processes (see Figure I.3):

- *Generating diverse ideas:* The capacity to think flexibly by developing ideas that are distinctively different from one another. The focus is on the uniqueness of each idea among multiple ideas rather than the quality of ideas.
- *Generating creative ideas:* The capacity to develop ideas that are uncommon, or infrequent, relative to the responses of other students completing the same task. The ideas need to be both unique and appropriate, meaning that they are useful with respect to the situational context.
- *Evaluating and improving ideas:* The capacity to modify someone else's work in a way that maintains the content but offers an original improvement or advancement.

Within these three processes, "ideas" can be expressed in different formats, such as a poem, a research hypothesis, or a drawing.

Figure I.3

Competency model for the PISA test of creative thinking



Source: OECD (2023a, p. 150).

Each of the processes is assessed differently. For the facet of generating diverse ideas, students are not evaluated based on the quantity of their ideas but rather on how different their ideas are from one another. Within the process of generating creative ideas, originality is measured by frequency — for example, how common is a student's response compared to those of other students who completed the same task? Lastly, with respect to evaluating and improving ideas, responses are assessed by whether they improve an existing idea in a unique way (OECD, 2022).

Description of the PISA 2022 creative thinking assessment

The PISA 2022 creative thinking assessment is composed of two parts: a cognitive test and background questionnaires. Although the assessment included questionnaires for students, parents,[5] teachers, and school principals, the parent and teacher questionnaires were offered as international options. In Canada, only the student and school questionnaires were administered; in some other countries, the optional parent and teacher questionnaires were also administered.

Component 1: Cognitive test in creative thinking

As part of the PISA assessment, students are asked to complete a cognitive test consisting of two 60-minute sections. In PISA 2022, typically 94 percent of participating students within each country were assigned test forms containing 60 minutes of mathematics items and 60 minutes of either reading, science, or creative thinking items (OECD, 2024, p. 24).

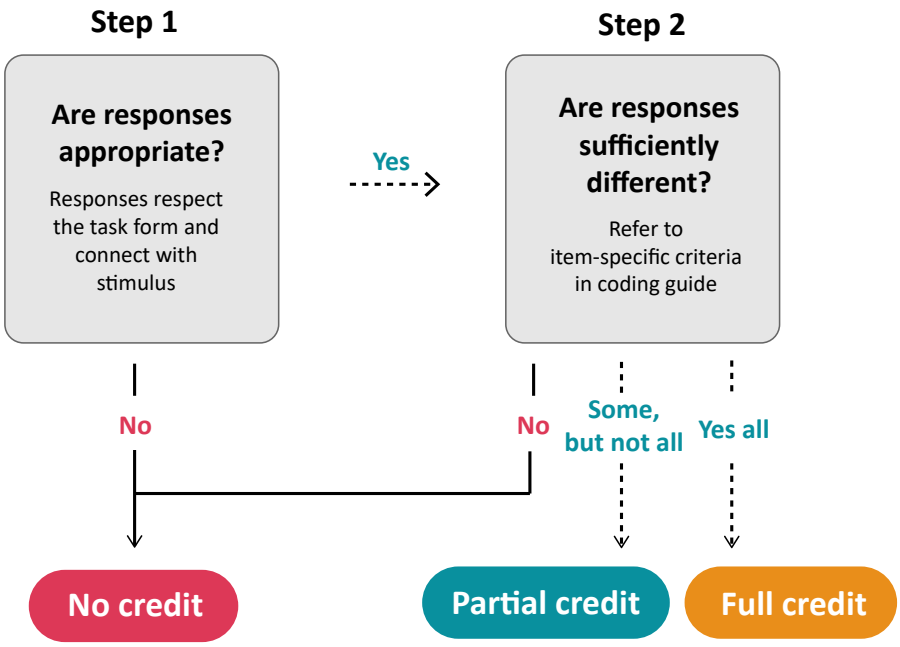
The creative thinking test item pool consisted of a total of 18 units with 32 open-ended items distributed across the four domains (written and visual expression, social and scientific problem solving) as well as the three facets (generating diverse and creative ideas and evaluating/improving ideas). To minimize the impact of varying individual experiences, the test was composed of everyday tasks that did not require specific technical knowledge. For example, one unit might focus on the topic of creating a poster for a science fair event with a space theme. Within each unit, there was a common stimulus, with open-ended tasks measuring a combination of the four domains of creative thinking as well as the three facets. In the science fair example, the respective facets might be assessed by students' ability to generate unique event names, design an innovative poster, and improve an existing poster in an original way. Information on sample units and items from the PISA 2022 creative thinking cognitive test is available in Appendix A.

Given the indefinite number of correct responses in the cognitive test, the approach to scoring follows a two- or three-step process, where a response can be given no, partial, or full credit. This approach has also been used for open-ended items in other PISA domains. The two-step process is used for tasks measuring the process of generating diverse ideas (Figure I.4). The three-step process is used for tasks measuring the processes of generating creative ideas and evaluating or improving ideas (Figure I.5). Full credit is assigned to a response only when it demonstrates both appropriateness and originality, and partial credit is assigned when only appropriateness is shown (OECD, 2022).

[5] In this report, "parents" refers to parents or guardians.

Figure I.4

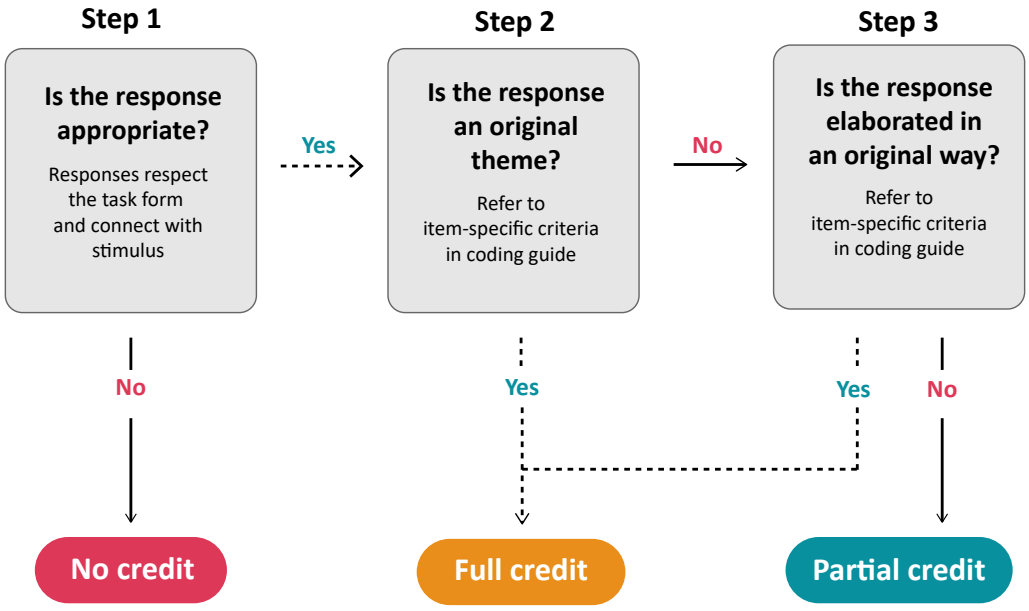
General coding process for open-ended tasks to generate diverse ideas



Source: OECD (2023a, p. 154).

Figure I.5

General coding process for open-ended tasks to generate creative ideas or evaluate and improve ideas



Source: OECD (2023a, p. 155).

These coding processes produce a student's score for the creative thinking cognitive test. In PISA 2022, students' scores in creative thinking are reported using a scale with a range from 0 to 60 points. This two-digit scale is notably smaller than what is used in the PISA mathematics, reading, and science assessments, where mean

scores are around 500 points. This smaller scale reflects a lower measurement precision due to the nature of this innovative domain, where — in contrast to a definite correct answer to a math question, for example — the tasks are open-ended. The size of the scale is also a result of the smaller number of items in the creative thinking assessment (OECD, 2024).

It is worth noting that a "large" difference in students' scores is defined as 3 score points (which "is approximately equivalent to one-quarter of the OECD standard deviation in creative thinking performance"), and a "small" difference is defined as 1 score point ("which corresponds to just under one-tenth of the OECD standard deviation in creative thinking performance") (OECD, 2024, p. 80). More information about statistical significance and how these creative thinking scores correlate to proficiency levels is provided in Chapter 1.

Component 2: Background questionnaires

Every cycle of PISA collects self-reported information from students, teachers, parents, and school principals, using questionnaires with Likert-scale responses (e.g., possible answers ranging from strongly agree to strongly disagree). As previously mentioned, in Canada, background questionnaires were administered only to students and school principals. The PISA 2022 questionnaires gathered information about various factors affecting creative thinking (OECD, 2022):

Individual factors (student questionnaire only)

- *Curiosity and exploration:* Scaled response questions allowed respondents to self-report on personality traits such as openness to new experiences.
- *Beliefs about creativity:* Students used a scale to express their beliefs about creativity in general, such as whether they believe it is a learned or innate trait.
- *Creative self-efficacy:* Students self-reported on their confidence in their own creativity in general as well as in specific domains.

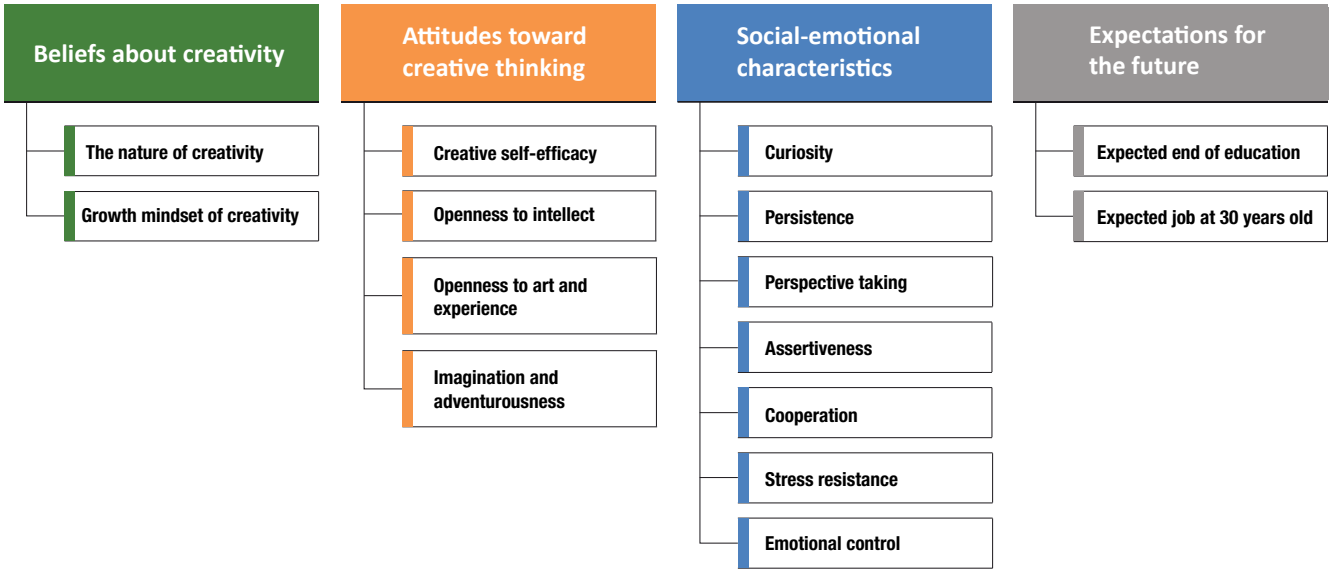
Environmental factors (student and school questionnaires)

- *School environment:* The student questionnaire collected information about student-teacher interactions; both the school and student questionnaires (and all four questionnaires in some countries) collected information about the general school environment to provide insights on the role of extrinsic motivation.
- *Creative activities in school:* Students were asked about their participation in activities both inside and outside school. School principals (and teachers in some countries) provided information about activities that took place as part of the curriculum as well as during extra-curricular time.

In addition to these individual and environmental factors, PISA 2022 asked students about their attitudes as well as their goals and expectations for the future as a way of measuring their motivation levels, which may be related to their creative thinking performance. Figure I.6 presents the four constructs covered in this part of the student questionnaire: students' beliefs about creativity, attitudes toward creative thinking, social-emotional characteristics, and expectations for the future.

Figure I.6

PISA 2022 student questionnaire coverage of student beliefs, attitudes, and expectations related to creative thinking



Source: OECD (2024, p. 158).

Objectives and organization of this report

The purpose of this report is to provide a high-level description of the results, by proficiency levels and average scores, from the PISA 2022 creative thinking assessment for Canada and the provinces. This report also examines student performance by demographic variables and in the context of data from the student questionnaire. Results are compared at the pan-Canadian, provincial, and OECD levels. This report complements the PISA 2022 international report on creative thinking (OECD, 2024).

Chapter 1 provides information on the overall performance (proficiency levels and average scores) of 15-year-old students in Canada overall and across provinces in the PISA 2022 assessment of creative thinking. It also examines performance by the language of the school system, gender, immigrant status, language spoken at home, and socioeconomic status. This chapter also places the performance of students in an international context. In addition, it explores the extent to which students' performance in the core domains in PISA (mathematics, reading, and science) is associated with their performance in creative thinking.

Chapter 2 examines results from the student background questionnaire, analyzing students' self-reported behaviour and attitudes related to creative thinking, such as creative self-efficacy, openness to intellect, participation in creative activities offered in their school, and how creativity is supported and fostered in their school, class, peer, and family environments. These findings are analyzed in connection to students' creative thinking performance as well in relation to sociodemographic characteristics such as language of school system, gender, immigrant status, and socioeconomic status.

The Conclusion presents a discussion of key findings and underscores the pressing need for education systems to better foster creative thinking skills among new generations of students.

Finally, the appendices provide information on sample items as well as data tables focused on achievement results and contextual information.

Chapter 1

Canadian Students' Performance in Creative Thinking in an International Context

"Creativity is seeing what others see and thinking what no one else ever thought."

– Albert Einstein

This chapter presents results of the PISA 2022 assessment in the innovative domain of creative thinking. Canadian students' performance is generally presented by province and as an overall Canadian average; where relevant, the OECD average is also provided.[6]

In the first section, the performance of 15-year-old students across Canada on the creative thinking test is compared to the OECD average by proficiency level, average score, and variation in performance. The next section explores the theme of equity in Canada by comparing the scores of high- and low-achieving students in creative thinking. Then, students' performance in creative thinking is compared with their performance in the PISA core domains, as it can be expected that students who perform well in creative thinking are likely to perform well in other subject areas (OECD, 2024).

Creative thinking results are also presented by language of the school system in Canada (i.e., English or French). PISA samples are representative of both majority and minority official language groups in the eight provinces that had sufficient data for valid statistical comparisons. Owing to the small sample size, results for students enrolled in French-language schools in Newfoundland and Labrador and Prince Edward Island are not provided separately; however, they are included in the calculations for the overall average scores in those provinces.

The final sections of this chapter examine differences in creative thinking proficiency levels and achievement scores by gender and then by key background characteristics. Results are examined by students' immigrant status, language spoken at home, and socioeconomic status, as earlier assessments have shown that students' success can be influenced by their individual and family characteristics.

Key findings

- Canada performed well in the PISA 2022 creative thinking assessment. The proportion of 15-year-old Canadian students who performed at Level 3 (the baseline level of proficiency in creative thinking) or above was 89 percent, compared to the OECD average of 78 percent.
- Out of a total of 60 points, the average score in Canada for the creative thinking assessment was 38 points, which is 5 points above the OECD average of 33 points. At the provincial level, average scores ranged from 34 points in Newfoundland and Labrador to 40 points in Alberta.
- In Canada, 45 percent of students were high achievers (students performing at Levels 5 and 6) in creative thinking, compared to the OECD average of 27 percent. At the provincial level, the proportion of high achievers ranged from 31 percent in Newfoundland and Labrador to 52 percent in Alberta.

[6] In this report, the OECD averages presented are calculated based on data, where available, from the 28 OECD member countries that participated in the PISA 2022 creative thinking assessment.

- There was a greater proportion of high achievers in anglophone school systems (47 percent) compared to francophone school systems (38 percent) on average across Canada.
- Girls outperformed boys in Canada overall as well as across all provinces except Prince Edward Island, where there was no difference in the average scores of boys and girls.
- In Canada, 92 percent of second-generation immigrant students achieved scores in creative thinking at the baseline level of proficiency (Level 3) or above, compared to 89 percent of non-immigrant students and 86 percent of first-generation immigrant students.
- With respect to language spoken at home, Canadian students who spoke French at home had an average score of 37 points, while students speaking English at home and students speaking another language at home both had an average score of 38 points.
- The achievement gap between socioeconomically advantaged students and socioeconomically disadvantaged students was smaller in Canada (7 points) than on average across OECD countries (10 points).

Proficiency levels in the PISA creative thinking assessment

The PISA creative thinking assessment proficiency scale is organized into seven levels. Table 1.1 provides detailed descriptions of the skills required to complete the tasks at Levels 1 to 6. The seventh level is composed of students who scored below Level 1, which is the lowest level of creative thinking skills.[7] Level 6 corresponds to the highest level of creative thinking skills. While in the PISA assessments of mathematics, reading, and science, Level 2 is considered the baseline level of proficiency that students need in order to participate fully in modern society, Level 3 is used as the baseline level of proficiency in the domain of creative thinking (OECD, 2024).

In addition to describing the six proficiency levels, Table 1.1 also shows the lower score limit for each level as well as the average percentage of students across OECD countries and in Canada overall who are able to perform tasks at a given level and the one(s) above it — it is assumed that students classified at a given proficiency level can perform most of the tasks at that level as well as the tasks at the preceding level or levels (Appendix B.1.1a–b).

Table 1.1

PISA 2022 creative thinking proficiency levels – summary description

Level	Lower score limit	Percentage of students able to perform tasks at this level or above	Characteristics of tasks
6	48	8.9% across OECD countries and 21.4% in Canada	At **Level 6**, students can: • productively engage in creative idea generation, generating both original and diverse ideas for a wide range of expressive and problem-solving tasks, including those in more complex, abstract, and unfamiliar contexts • identify weaknesses in existing solutions to social or scientific problems, including those that are in less familiar contexts, and build on this understanding to suggest original and innovative ways to improve solutions • generate several appropriate solution ideas for complex social and scientific problems that require more specific knowledge of the domain context and that have a more restricted solution space • create and improve more abstract visual designs, combining visual elements and representations in unexpected ways and conveying an original interpretation or iteration of an existing representation for expressive tasks

[7] Canadian overall data for this seventh level are not depicted because there were too few observations to be published.

Table 1.1 (cont'd)

PISA 2022 creative thinking proficiency levels – summary description

Level	Lower score limit	Percentage of students able to perform tasks at this level or above	Characteristics of tasks
5	41	27.0% across OECD countries and 44.8% in Canada	At **Level 5**, students can: • productively engage in creative idea generation, generating both original and diverse ideas for a range of expressive and problem-solving tasks • think of several qualitatively different ways to express their imagination and to address familiar social and scientific problems • make several different idea associations, considering different interpretations and perspectives on the same issue or stimulus • use their imagination to create original written outputs that make unconventional associations between ideas or that add atypical details to elaborate creatively on common themes for both simple and more abstract written expression tasks • create original visual outputs that combine elements in an unusual or unexpected way for open visual design tasks • generate unconventional solution ideas that integrate innovative approaches in familiar social, and sometimes scientific, problem contexts, including when tasked to iterate on and improve an existing solution idea in more open, familiar problem contexts
4	32	53.7% across OECD countries and 70.4% in Canada	At **Level 4**, students can: • productively engage in idea generation across a range of expressive and problem-solving tasks • generate original and diverse ideas for simple tasks in more familiar domain contexts • generate an appropriate idea for most types of idea generation tasks, including more complex or unfamiliar problem-solving tasks and tasks in a scientific context • build on others' ideas for solutions in social and scientific contexts, although they tend to provide an obvious or common iteration with respect to their peers • generate their own original ideas in written expression tasks and sometimes when iterating on others' ideas • express their imagination in unexpected ways, making unconventional idea associations between elements of the stimulus and their written output, or they can add atypical details to elaborate creatively on more common ideas • often suggest two or three qualitatively different ideas in open written expression and social problem contexts, but are less successful in more complex or constrained social and scientific problem contexts
3	23	78.3% across OECD countries and 88.8% in Canada	**Level 3 is considered the baseline level of creative thinking proficiency.** At **Level 3**, students can: • generate one or several appropriate ideas for simple to moderately complex expressive and problem-solving tasks, including extended written ideas that require them to engage and express their imagination and coherently build upon others' ideas • typically suggest ideas that rely on obvious idea associations or common themes with respect to their peers, but they begin to demonstrate the ability to generate original solutions for familiar, everyday problems with a social focus • suggest solution ideas that not many other students think of or add an innovative or different twist to more conventional solution ideas
2	15	93.1% across OECD countries and 97.3% in Canada	At **Level 2**, students can: • generate appropriate ideas for simple visual and written expression tasks as well as those that focus on solving familiar, everyday social problems • develop simple written ideas in the form of longer captions or short dialogues • typically suggest ideas that rely on obvious idea associations for expressive tasks or that refer to existing solutions for problems in social problem–solving tasks • generate more than one appropriate idea for some written expression and social problem–solving tasks, but these ideas are not qualitatively different from one another

Table 1.1 (cont'd)

PISA 2022 creative thinking proficiency levels – summary description

Level	Lower score limit	Percentage of students able to perform tasks at this level or above	Characteristics of tasks
1	6	99.6% across OECD countries and 99.9% in Canada	At **Level 1**, students can: • generate very simple visual designs using isolated shapes or existing visual elements, and in some cases very short written outputs (e.g., a few words), that require them to engage their imagination • rely on obvious themes or idea associations as the basis for their response and struggle to generate more than one appropriate idea even for very open and simple imagination tasks • typically generate simple visual or written outputs with few details that reflect only a minimal level of engagement with the task

Adapted from OECD (2024, p. 70).
Note: Results for Canada and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement in creative thinking

The results of student performance on the PISA 2022 creative thinking test are presented in this report in two ways: as the percentage of students attaining each proficiency level and as average scores. Results are presented for Canada overall and by province; when appropriate, the OECD average (i.e., the average across the 28 participating OECD countries) is also provided.

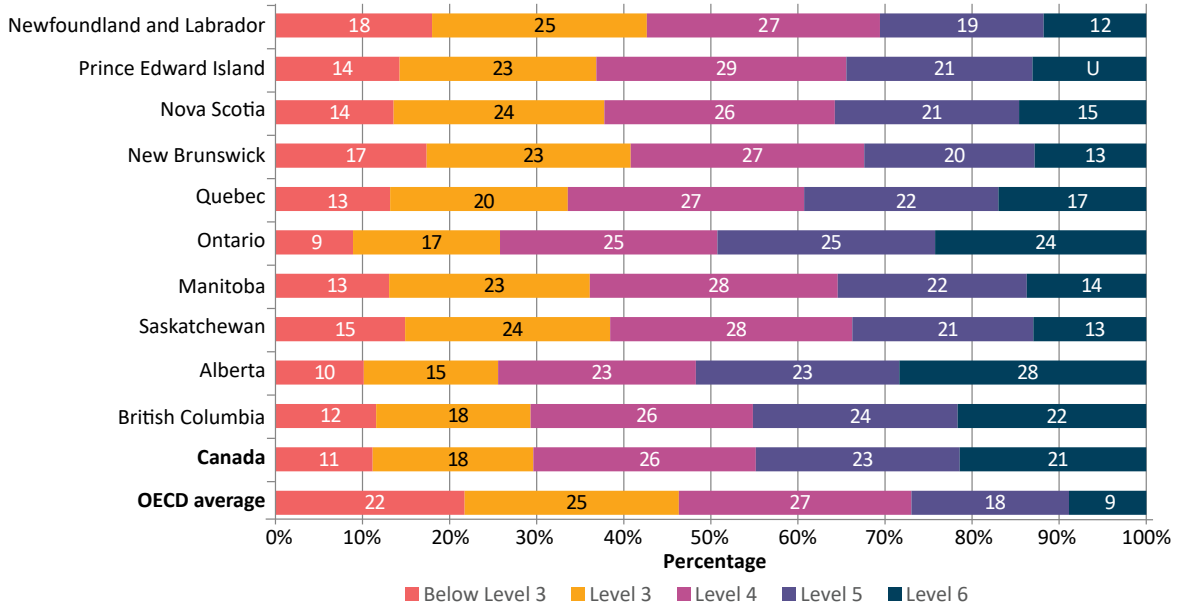
Achievement in creative thinking by proficiency level

In the PISA 2022 creative thinking assessment, 89 percent of Canadian students and 78 percent of students on average across OECD countries performed at or above Level 3, which is considered by OECD to be the baseline level of proficiency for creative thinking. Inversely, 11 percent of Canadian students did not reach Level 3, which is considerably less than the OECD average of 22 percent. Only two countries — Singapore and Latvia — had a significantly higher proportion of students performing at Level 3 or above than Canada (Appendix B.1.1b).

Within Canada, the percentage of students at or above the baseline level of performance ranged from 82 percent in Newfoundland and Labrador to 91 percent in Ontario. Inversely, the percentage of low achievers (those achieving below Level 3) ranged from 9 percent in Ontario to 18 percent in Newfoundland and Labrador (Figure 1.1, Appendix B.1.1b).

Figure 1.1

Percentage of students at each proficiency level in creative thinking



U Too unreliable to be published.
Note: Percentages may not add up at 100 due to rounding. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

At the higher end of the PISA creative thinking proficiency scale, 45 percent of Canadian students performed at Levels 5 and 6, compared to 27 percent performing at these levels on average across OECD countries (Figure 1.1, Appendix B.1.1b). Only Singapore (58 percent) had a larger proportion of students performing at Levels 5 and 6 compared to Canada (Appendix B.1.1b). At the provincial level, at least 45 percent of students in Ontario, Alberta, and British Columbia were high performers (reaching Levels 5 and 6) in the creative thinking assessment. The proportion of high-performing students varied across provinces, ranging from 31 percent in Newfoundland and Labrador to 52 percent in Alberta (Figure 1.1, Appendix B.1.1b).

Achievement in creative thinking by average score

For the 2022 creative thinking assessment, the OECD average score was 33 points, with a standard deviation of 11 points. This means that, in this assessment, approximately 68 percent of all students in OECD countries scored between 22 and 44 on the creative thinking scale (i.e., within one standard deviation of the average) (OECD, 2024).

International studies such as PISA summarize student performance by comparing the relative standing of countries based on their average test scores. This approach can be misleading, because there is a margin of error associated with each score (see the box below). When interpreting average performances between countries and provinces, only those differences that are statistically significant should be considered. Thus, unless otherwise stated, only statistically significant differences are noted in this report.

A note on statistical comparisons

The purpose of PISA is to report results on the skills of 15-year-old students. Therefore, a random sample of 15-year-old students was selected to participate in the assessment. The averages (for mean scores and proficiency-levels proportions) were computed from the scores of these random samples of students from each country, and not from the overall population of 15-year-old students in each country. Consequently, it cannot be said with certainty that a sample average has the same value as the population average that would have been obtained had all 15-year-old students been assessed.

Additionally, a degree of error is associated with the scores describing student performance, as these scores are estimated based on student responses to test items. A statistic called the standard error is used to express the degree of uncertainty associated with sampling error and measurement error. The standard error can be used to construct a confidence interval, which provides a means of making inferences about the population averages and proportions in a manner that reflects the uncertainty associated with sample estimates. A 95 percent confidence interval is used in this report and represents a range of plus or minus about two standard errors around the sample average. Using this confidence interval, it can be inferred that the population mean or proportion would lie within the confidence interval in 95 out of 100 replications of the measurement, using different samples randomly drawn from the same population.

When comparing scores among countries, provinces, or population subgroups, the degree of error in each average should be considered in order to determine if averages are significantly different from each other. Standard errors and confidence intervals may be used as the basis for performing these comparative statistical tests. Such tests can identify, with a known probability, whether actual differences are likely to be observed in the populations being compared. For example, when an observed difference is significant at the .05 level, it implies that the probability is less than .05 that the observed difference could have occurred because of sampling or measurement error. When comparing countries and/or provinces, extensive use is made of this type of statistical test to reduce the likelihood that differences due to sampling or measurement errors will be interpreted as real.

A test of significance (t-test) was conducted in order to determine whether differences were statistically significant. In the case of multiple t-tests, no corrections were made to reduce the false positive, or Type-I error rate. **Unless otherwise stated, only statistically significant differences at the .05 level are noted in this report, for proportions of students at proficiency levels and for mean scores**.

The four countries with the highest average scores in the PISA 2022 creative thinking assessment were Singapore (41 points), Korea (38 points), Canada (38 points), and Australia (37 points). As shown in Table 1.2, Canada was outperformed only by Singapore. Students in Canada performed as well as students in Korea and Australia (Appendix B.1.2).

Table 1.2

Achievement scores in creative thinking

Country, province, or OECD average	Average score	95% confidence interval	Countries or provinces whose mean score is not significantly different from the comparison country, province, or OECD average
Singapore	41.0	40.6–41.3	**Alberta**
Alberta	39.6	38.1–41.0	Singapore, Ontario, Korea, **British Columbia**
Ontario	39.1	38.4–39.8	**Alberta**, Korea, **British Columbia**
Korea	38.1	37.3–38.8	**Alberta**, **Ontario**, **British Columbia**, **Canada**, Australia, **Prince Edward Island**
British Columbia	38.0	36.6–39.3	**Alberta**, **Ontario**, Korea, **Canada**, Australia, **Quebec**, **Prince Edward Island**
Canada	37.9	37.5–38.4	Korea, **British Columbia**, Australia, **Prince Edward Island**
Australia	37.3	36.8–37.8	Korea, **British Columbia**, **Canada**, **Quebec**, **Nova Scotia**, **Prince Edward Island**
Quebec	36.5	35.5–37.5	**British Columbia**, Australia, New Zealand, Estonia, Finland, **Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, **New Brunswick**, **Newfoundland and Labrador**
New Zealand	36.4	35.9–37.0	**Quebec**, Estonia, Finland, **Manitoba**, **Nova Scotia**, **Prince Edward Island**, **Saskatchewan**, **New Brunswick**, **Newfoundland and Labrador**
Estonia	35.9	35.3–36.4	**Quebec**, New Zealand, Finland, **Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, **New Brunswick**, **Newfoundland and Labrador**
Finland	35.8	35.2–36.4	**Quebec**, New Zealand, Estonia, **Manitoba**, **Nova Scotia**, **Denmark**, **Prince Edward Island**, **Saskatchewan**, Latvia, **New Brunswick**, **Newfoundland and Labrador**
Manitoba	35.7	34.6–36.9	**Quebec**, New Zealand, Estonia, Finland, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, **Newfoundland and Labrador**
Nova Scotia	35.7	34.0–37.4	Australia, **Quebec**, New Zealand, Estonia, Finland, **Manitoba**, Denmark, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, Poland, **Newfoundland and Labrador**, Portugal
Denmark	35.5	35.0–36.0	**Quebec**, Estonia, Finland, **Manitoba**, **Nova Scotia**, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, **Newfoundland and Labrador**
Prince Edward Island	35.5	32.0–39.0	Korea, **British Columbia**, **Canada**, Australia, **Quebec**, New Zealand, Estonia, Finland, **Manitoba**, **Nova Scotia**, Denmark, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, Poland, **Newfoundland and Labrador**, Portugal, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Israel
Saskatchewan	35.2	34.0–36.3	**Quebec**, New Zealand, Estonia, Finland, **Manitoba**, **Nova Scotia**, **Denmark**, **Prince Edward Island**, Latvia, Belgium, **New Brunswick**, Poland, **Newfoundland and Labrador**
Latvia	35.1	34.5–35.6	Finland, **Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, Belgium, **New Brunswick**, Poland, **Newfoundland and Labrador**
Belgium	34.9	34.4–35.4	**Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, Latvia, **New Brunswick**, Poland, **Newfoundland and Labrador**
New Brunswick	34.6	32.4–36.7	**Quebec**, New Zealand, Estonia, Finland, **Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, Poland, **Newfoundland and Labrador**, Portugal, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands
Poland	34.4	33.9–35.0	**Nova Scotia**, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, **Newfoundland and Labrador**, Portugal
Newfoundland and Labrador	34.1	31.6–36.6	**Quebec**, New Zealand, Estonia, Finland, **Manitoba**, **Nova Scotia**, Denmark, **Prince Edward Island**, **Saskatchewan**, Latvia, Belgium, **New Brunswick**, Poland, Portugal, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Israel, Macao (China), Hong Kong (China)
Portugal	33.9	33.3–34.5	**Nova Scotia**, **Prince Edward Island**, **New Brunswick**, Poland, **Newfoundland and Labrador**
Lithuania	32.9	32.3–33.4	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Israel

Table 1.2 (cont'd)

Achievement scores in creative thinking

Country, province, or OECD average	Average score	95% confidence interval	Countries or provinces whose mean score is not significantly different from the comparison country, province, or OECD average
Spain	32.8	32.3–33.2	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Israel
OECD average	32.7	32.6–32.8	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Israel
Czech Republic	32.6	32.1–33.2	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Chinese Taipei, Germany, France, Netherlands, Israel
Chinese Taipei	32.6	31.9–33.4	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Czech Republic, Germany, France, Netherlands, Israel
Germany	32.5	31.7–33.3	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, France, Netherlands, Israel, Hong Kong (China)
France	32.4	31.8–33.0	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, Netherlands, Israel, Hong Kong (China)
Netherlands	32.4	31.5–33.3	**Prince Edward Island**, **New Brunswick**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Israel, Macao (China), Hong Kong (China), Italy
Israel	32.3	31.5–33.0	**Prince Edward Island**, **Newfoundland and Labrador**, Lithuania, Spain, ***OECD average***, Czech Republic, Chinese Taipei, Germany, France, Netherlands, Macao (China), Hong Kong (China), Italy
Macao (China)	31.6	31.2–32.0	**Newfoundland and Labrador**, Netherlands, Israel, Hong Kong (China), Italy, Malta, Hungary
Hong Kong (China)	31.6	30.9–32.3	**Newfoundland and Labrador**, Germany, France, Netherlands, Israel, Macao (China), Italy, Malta, Hungary, Chile
Italy	31.4	30.8–32.0	Netherlands, Israel, Macao (China), Hong Kong (China), Malta, Hungary, Chile
Malta	31.3	30.9–31.8	Macao (China), Hong Kong (China), Italy, Hungary, Chile
Hungary	30.9	30.3–31.6	Macao (China), Hong Kong (China), Italy, Malta, Chile, Croatia, Iceland
Chile	30.7	30.0–31.3	Hong Kong (China), Italy, Malta, Hungary, Croatia, Iceland, Slovenia
Croatia	30.5	29.8–31.1	Hungary, Chile, Iceland, Slovenia
Iceland	30.5	30.0–30.9	Hungary, Chile, Croatia, Slovenia
Slovenia	30.0	29.5–30.4	Chile, Croatia, Iceland, Slovak Republic
Slovak Republic	29.2	28.4–30.0	Slovenia, Mexico, Serbia, Uruguay, United Arab Emirates
Mexico	29.0	28.4–29.6	Slovak Republic, Serbia, Uruguay, United Arab Emirates
Serbia	28.7	28.0–29.4	Slovak Republic, Mexico, Uruguay, United Arab Emirates
Uruguay	28.6	28.0–29.3	Slovak Republic, Mexico, Serbia, United Arab Emirates
United Arab Emirates	28.4	28.1–28.7	Slovak Republic, Mexico, Serbia, Uruguay
Qatar	27.7	27.2–28.1	Costa Rica, Greece, Ukrainian regions (18 of 27)
Costa Rica	27.5	26.9–28.1	Qatar, Greece, Ukrainian regions (18 of 27)
Greece	27.0	26.3–27.7	Qatar, Costa Rica, Ukrainian regions (18 of 27), Romania
Ukrainian regions (18 of 27)	26.9	25.7–28.1	Qatar, Costa Rica, Greece, Romania, Colombia, Jamaica
Romania	26.2	25.3–27.2	Greece, Ukrainian regions (18 of 27), Colombia, Jamaica, Malaysia
Colombia	25.6	24.6–26.5	Ukrainian regions (18 of 27), Romania, Jamaica, Malaysia, Mongolia
Jamaica	25.5	24.5–26.6	Ukrainian regions (18 of 27), Romania, Colombia, Malaysia, Mongolia
Malaysia	25.1	24.4–25.9	Romania, Colombia, Jamaica, Mongolia
Mongolia	24.9	24.3–25.5	Colombia, Jamaica, Malaysia
Moldova	23.9	23.3–24.6	Kazakhstan, Brunei Darussalam, Cyprus, Peru, Brazil, Saudi Arabia, Panama

Table 1.2 (cont'd)

Achievement scores in creative thinking

Country, province, or OECD average	Average score	95% confidence interval	Countries or provinces whose mean score is not significantly different from the comparison country, province, or OECD average	
Kazakhstan	23.8	23.3–24.4	Moldova, Brunei Darussalam, Cyprus, Peru, Brazil, Saudi Arabia, Panama, El Salvador	
Brunei Darussalam	23.7	23.4–24.1	Moldova, Kazakhstan, Cyprus, Peru, Brazil, Saudi Arabia, Panama, El Salvador	
Cyprus	23.7	23.3–24.1	Moldova, Kazakhstan, Brunei Darussalam, Peru, Brazil, Saudi Arabia, Panama, El Salvador	
Peru	23.5	22.8–24.1	Moldova, Kazakhstan, Brunei Darussalam, Cyprus, Brazil, Saudi Arabia, Panama, El Salvador, Baku (Azerbaijan)	
Brazil	23.3	22.7–23.9	Moldova, Kazakhstan, Brunei Darussalam, Cyprus, Peru, Saudi Arabia, Panama, El Salvador, Baku (Azerbaijan)	
Saudi Arabia	23.3	22.7–23.9	Moldova, Kazakhstan, Brunei Darussalam, Cyprus, Peru, Brazil, Panama, El Salvador, Baku (Azerbaijan)	
Panama	23.2	22.5–23.9	Moldova, Kazakhstan, Brunei Darussalam, Cyprus, Peru, Brazil, Saudi Arabia, El Salvador, Baku (Azerbaijan)	
El Salvador	23.0	22.3–23.7	Kazakhstan, Brunei Darussalam, Cyprus, Peru, Brazil, Saudi Arabia, Panama, Baku (Azerbaijan)	
Baku (Azerbaijan)	22.8	22.2–23.4	Peru, Brazil, Saudi Arabia, Panama, El Salvador	
Thailand	20.9	20.2–21.7	Bulgaria, Jordan	
Bulgaria	20.7	20.0–21.5	Thailand, Jordan	
Jordan	20.2	19.5–20.9	Thailand, Bulgaria	
North Macedonia	19.1	18.7–19.6	Indonesia, Palestinian Authority	
Indonesia	19.0	18.2–19.7	North Macedonia, Palestinian Authority	
Palestinian Authority	18.5	17.8–19.1	North Macedonia, Indonesia	
Dominican Republic	15.5	15.0–16.0	Morocco	
Morocco	15.5	14.3–16.6	Dominican Republic, Uzbekistan, Philippines	
Uzbekistan	14.5	14.0–15.0	Morocco, Philippines	
Philippines	14.2	13.2–15.2	Morocco, Uzbekistan, Albania	
Albania	13.1	12.5–13.6	Philippines	

Note: OECD countries appear in italics. The OECD average was 32.7 points, with a standard error of 0.1. See OECD (2023b) for a note regarding Cyprus. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

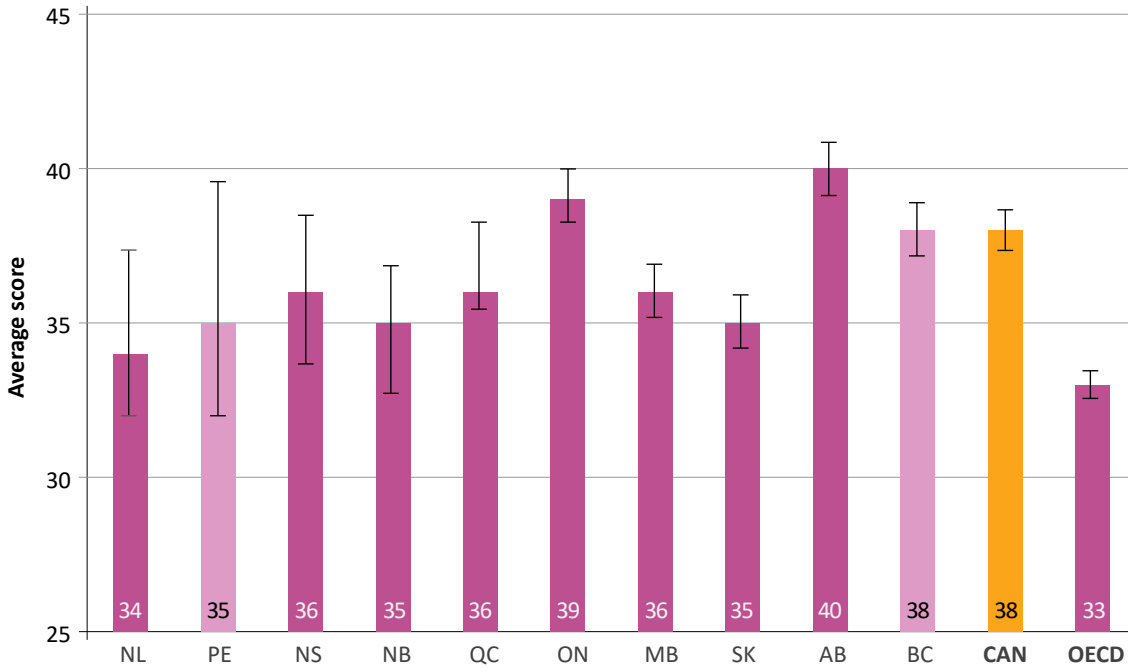
Above the Canadian average
At the Canadian average
Below the Canadian average

Above the OECD average
At the OECD average
Below the OECD average

Across Canada, students in seven provinces (Nova Scotia, Quebec, Ontario, Saskatchewan, Manitoba, Alberta, and British Columbia) achieved average scores above the OECD average. Students in the remaining three provinces achieved average scores that were at the OECD average. Figure 1.2 illustrates the average achievement scores in the creative thinking assessment across provinces, along with the OECD and Canadian averages. Students in Alberta and Ontario achieved scores that were above the Canadian average, while students in Prince Edward Island and British Columbia achieved scores that were at the Canadian average. Students in the remaining six provinces achieved scores below the Canadian average (Figure 1.2, Appendix B.1.2).

Figure 1.2

Achievement scores in creative thinking



Note: Darker shades denote significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details). Error bars represent 95 percent confidence intervals.

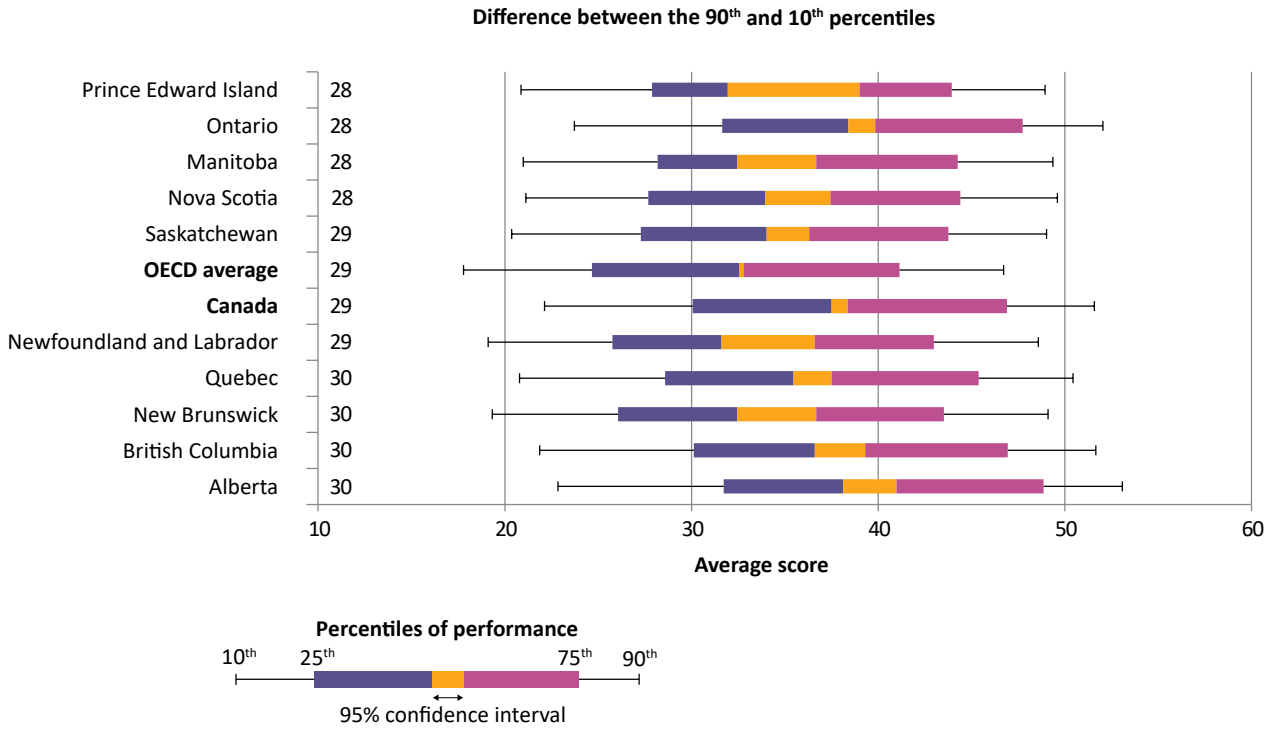
Equity in Canada

Another way of studying differences in achievement is to look at the distribution of scores within a population. The difference between the mean scores of students in the 90th percentile and those in the 10th percentile is often used as a proxy for equity in educational outcomes. Such an analysis examines the relative distribution of scores or the gap that exists between students with the highest and lowest levels of performance within each country or province. Figure 1.3 shows the difference in average scores between the lowest achievers (those in the 10th percentile) and highest achievers (those in the 90th percentile) in creative thinking. For Canada overall, those in the highest decile scored 29 points higher than those in the lowest decile, which is similar to the OECD average (Appendix B.1.3).

At the provincial level, the smallest gap (i.e., greater equity) is 28 points, found in Prince Edward Island, Nova Scotia, Ontario, and Manitoba, while the largest gap (i.e., less equity) is 30 points, in New Brunswick, Quebec, Alberta, and British Columbia. It is worth noting that, although high-achieving countries tend to have larger gaps than those in low-achieving countries, high achievement does not necessarily come at the cost of equity. Singapore is the top-performing country in creative thinking, but it has a relatively low variation between the top and bottom percentiles (25 points). The country with the smallest gap is Latvia (22 points) (Appendix B.1.3).

Figure 1.3

Differences between high and low achievers in creative thinking



Note: Results are ordered from the smallest to the largest difference between the 90th and 10th percentiles. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Correlation between creative thinking and PISA core domains

Although, in PISA, all the tasks are designed with the intention not to substantially overlap across domains, a positive relationship between students' scores in creative thinking and those in the core PISA domains of mathematics, reading, and science can be observed. Assessing the correlation between creative thinking and the core domains provides an opportunity to understand how achievement in these domains can influence performance in creative thinking.

In Canada, the correlation between performance in creative thinking and the core domains was 0.56 in mathematics, 0.55 in reading, and 0.54 in science, all of which are lower than the OECD averages of 0.67, 0.66, and 0.66, respectively (Appendix B.1.4). In other words, the relationship between creative thinking performance and core domain performance is stronger on average across OECD countries than across Canada. This finding supports the argument that the creative thinking assessment succeeds in measuring a subset of skills that are distinct from those measured in the core domain assessments (OECD, 2024). Table 1.3 illustrates how correlations between creative thinking and the core domains are consistently lower than those exclusively among the core domains (i.e., between mathematics and science, mathematics and reading, and reading and science). This finding prompts interesting questions about the interrelatedness of creative thinking and the core domains.

Table 1.3

Correlation of creative thinking performance with performance in the PISA core domains

	Canada			OECD average		
	Mathematics	Reading	Science	Mathematics	Reading	Science
Mathematics	--	--	0.81	--	--	0.87
Reading	0.76	--	0.73	0.80	--	0.80
Creative thinking	0.56	0.55	0.54	0.67	0.66	0.66

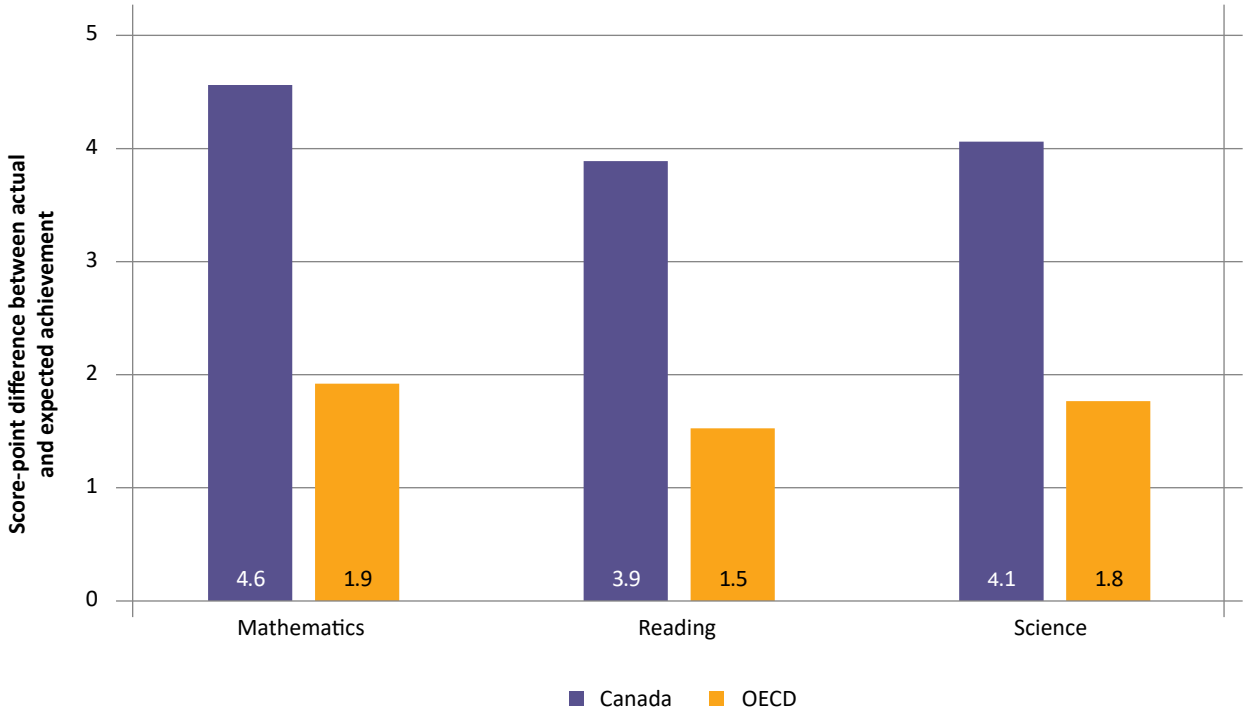
Note: Results for Canada and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Given that performance in creative thinking is positively correlated with performance in the three core domains of mathematics, reading, and science, it is useful to examine the distinctive aspects of creative thinking. In this context, "relative performance" refers to students' performance in creative thinking after accounting for their mathematics, reading, or science performance; essentially, it describes how well students performed in creative thinking compared to other students with similar mathematics, reading, or science scores (OECD, 2024, p. 86).

Figure 1.4 shows the relative performance in creative thinking based on students' scores in mathematics, reading, and science. Canadian students scored higher than expected in creative thinking based on their scores in the three core domains. For example, students scored 5 points higher in creative thinking than expected based on their mathematics scores, and 4 points higher than expected based on their scores in both reading and science. These score-point differences were higher in Canada overall compared to the OECD average of 2 points across all three domains. At the provincial level, the biggest difference in relative performance in creative thinking was based on scores in mathematics and ranged from 2 points in Quebec to 6 points in Ontario and Alberta (Appendix B.1.5).

Figure 1.4

Relative performance in creative thinking based on performance in core domains



Note: Results for Canada and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement in creative thinking by language of the school system

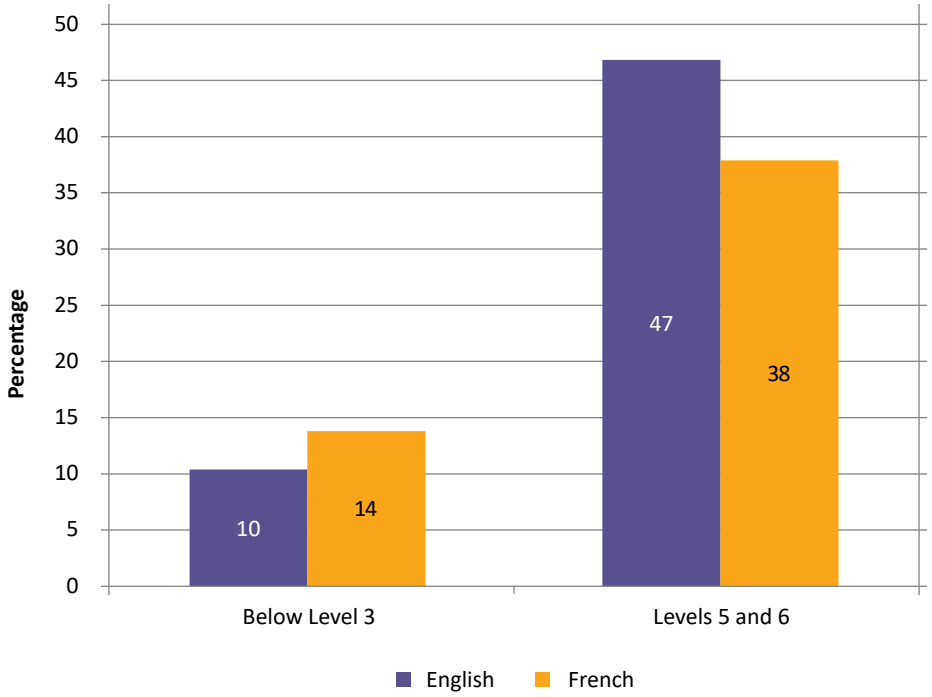
In eight Canadian provinces (Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia), samples were representative of both majority and minority official language groups and allow separate reporting of results by language of the school system.[8]

Achievement by proficiency level and language of the school system

Figure 1.5 shows the proportions of high achievers (students performing at Levels 5 and 6) and low achievers (below Level 3) in creative thinking for Canada overall by language of the school system in which students were enrolled.[9] On average across Canada, anglophone school systems had a greater proportion of high achievers and a smaller proportion of low achievers (47 and 10 percent, respectively) compared to francophone school systems (38 and 14 percent, respectively) (Appendix B.1.6b).

Figure 1.5

Percentage of Canadian students below Level 3 and at Levels 5 and 6 in creative thinking, by language of the school system



Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

In Canada overall and in Ontario, a greater proportion of students in anglophone systems reached Level 3 (the baseline level of proficiency) or above compared to students in francophone systems. The opposite was true for British Columbia, where a greater proportion of students in the francophone system achieved Level 3 or above compared to their anglophone counterparts. In the remaining six provinces, equity was observed between the language groups (Table 1.4, Appendix B.1.6b).

[8] With respect to the two official languages in Canada, English is the majority language outside of Quebec — 75 percent of Canadians report having English as their first official language. In Quebec, French is the majority language — 82 percent of people in Quebec report having French as their first official language (Statistics Canada, 2022).

[9] Within anglophone school systems, students in French Immersion programs completed the creative thinking assessment test in the language of instruction (French or English).

Table 1.4

Summary of Canadian and provincial results for percentage of students achieving at or above Level 3 in creative thinking, by language of the school system

Higher* percentage in anglophone schools	Higher* percentage in francophone schools	No significant difference between school systems
Canada, Ontario	British Columbia	Nova Scotia, New Brunswick, Quebec, Manitoba, Saskatchewan, Alberta

* Denotes significant difference.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, results for only English-language schools are available for these provinces. Results for Canada and most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan) should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When Canadian and provincial results at or above Level 3 are compared for English-language schools, a higher proportion of students in Ontario (91 percent) achieved these levels than students in Canada as a whole (89 percent). Students in Prince Edward Island, Nova Scotia, Quebec, Manitoba, Alberta, and British Columbia achieved these levels at a rate similar to the Canadian anglophone average, and students in the remaining provinces achieved Level 3 or above at a rate lower than the Canadian average. With respect to French-language schools, students in British Columbia (98 percent) achieved Level 3 or above at a higher rate than the Canadian average (86 percent), while those in the remaining provinces for which results are reported achieved these levels at a rate similar to the Canadian average (Table 1.5, Appendix B.1.6b).

Table 1.5

Comparison of Canadian and provincial results for percentage of students achieving at or above Level 3 in creative thinking, by language of the school system

Anglophone school systems		
Higher* percentage than Canada	**The same percentage as Canada**	**Lower* percentage than Canada**
Ontario	Prince Edward Island, Nova Scotia, Quebec, Manitoba, Alberta, British Columbia	Newfoundland and Labrador, New Brunswick, Saskatchewan
Francophone school systems		
Higher* percentage than Canada	**The same percentage as Canada**	**Lower* percentage than Canada**
British Columbia	Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta	

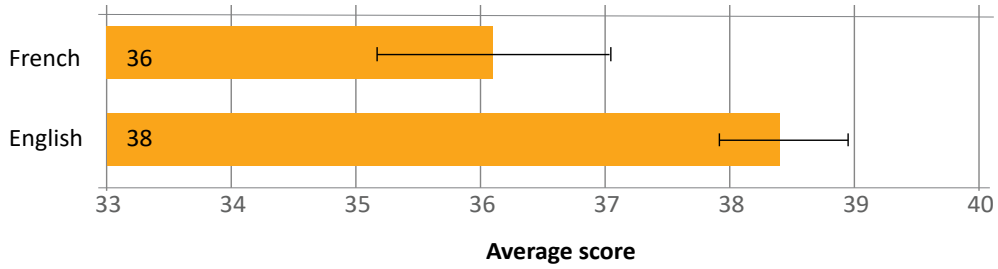
* Denotes significant difference.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, results for only English-language schools are available for these provinces. Results for Canada and most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan) should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement by average score and language of the school system

When scores are examined by language of the school system, students in anglophone school systems in Canada overall achieved higher average scores (38 points) compared to students in francophone school systems (36 points) (Figure 1.6, Appendix B.1.7).

Figure 1.6

Average scores in creative thinking in Canada, by language of the school system



Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details). Error bars represent 95 percent confidence intervals.

Table 1.6 shows how provincial achievement scores in creative thinking compare to the Canadian averages for both anglophone and francophone school systems. In anglophone systems, Ontario students scored above the Canadian English average, while the scores of students in Prince Edward Island, Quebec, Alberta, and British Columbia were at the Canadian English average. The scores for students in the remaining provinces were below the Canadian English average. In French-language schools, Quebec students scored above the Canadian French average, while students in Manitoba scored below the average. Students in Nova Scotia, New Brunswick, Ontario, Saskatchewan, Alberta, and British Colombia scored at the Canadian French average (Appendix B.1.7).

Table 1.6

Comparison of Canadian and provincial results for achievement scores in creative thinking, by language of the school system

Anglophone school system			
Canadian English average	**Above* the Canadian English average**	**At the Canadian English average**	**Below* the Canadian English average**
38	Ontario (39)	Prince Edward Island (35), Quebec (38), Alberta (40), British Columbia (38)	Newfoundland and Labrador (34), Nova Scotia (36), New Brunswick (35), Manitoba (36), Saskatchewan (35)
Francophone school system			
Canadian French average	**Above* the Canadian French average**	**At the Canadian French average**	**Below* the Canadian French average**
36	Quebec (36)	Nova Scotia (36), New Brunswick (34), Ontario (35), Saskatchewan (34), Alberta (35), British Columbia (34)	Manitoba (33)

* Denotes significant difference.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, results for only English-language schools are available for these provinces. Results for Canada and most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan) should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement in creative thinking by gender

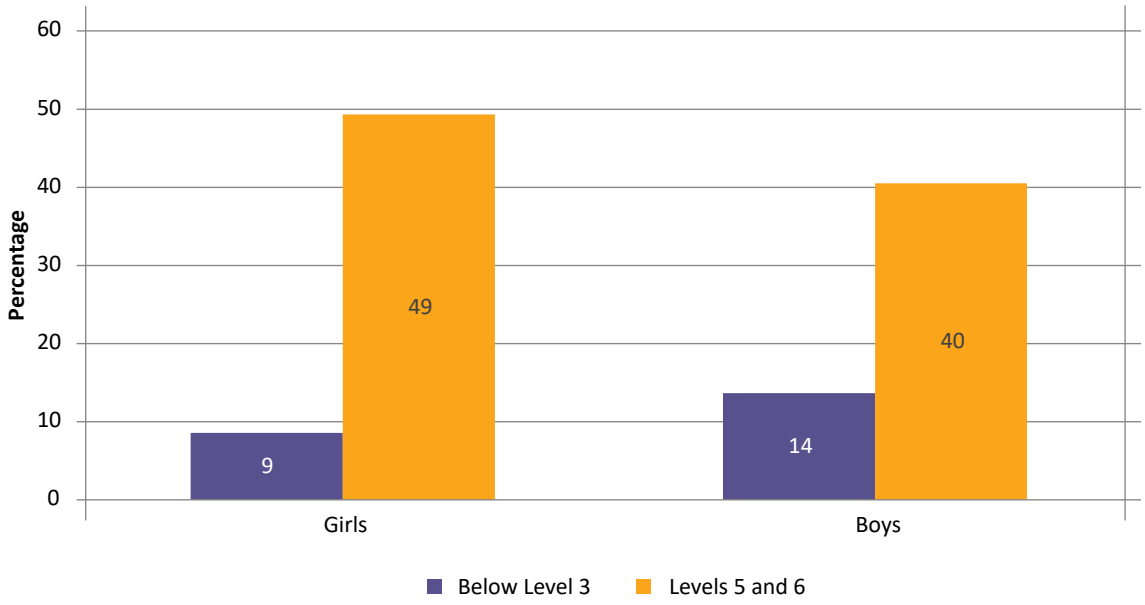
Girls outperformed boys in all but 3 of the 64 countries participating in the PISA 2022 creative thinking assessment (OECD, 2024). The same trend was seen in 9 provinces as well as in Canada overall. The gender gap favoured girls in all provinces except Prince Edward Island, where there was no difference in the achievement of boys and girls (Appendix B.1.9).

Achievement by proficiency level and gender

In Canada overall and in nine provinces, a greater proportion of girls than boys were high achievers (reaching Levels 5 and 6), with differences ranging from 7 percentage points in Quebec to 15 percentage points in Newfoundland and Labrador (Appendix B.1.8b). No difference between the proportion of girls and boys performing at Levels 5 and 6 was observed in Prince Edward Island. At the same time, a greater proportion of boys than girls were low achievers (below Level 3) in Canada overall (Figure 1.7) and in all but two provinces: in Alberta, a comparable proportion of girls and boys scored below Level 3, while in Prince Edward Island, the data for girls achieving at this level were too unreliable to be published (Figure 1.8, Appendix B.1.8a–b).

Figure 1.7

Percentage of Canadian students who performed below Level 3 and at Levels 5 and 6 in creative thinking, by gender

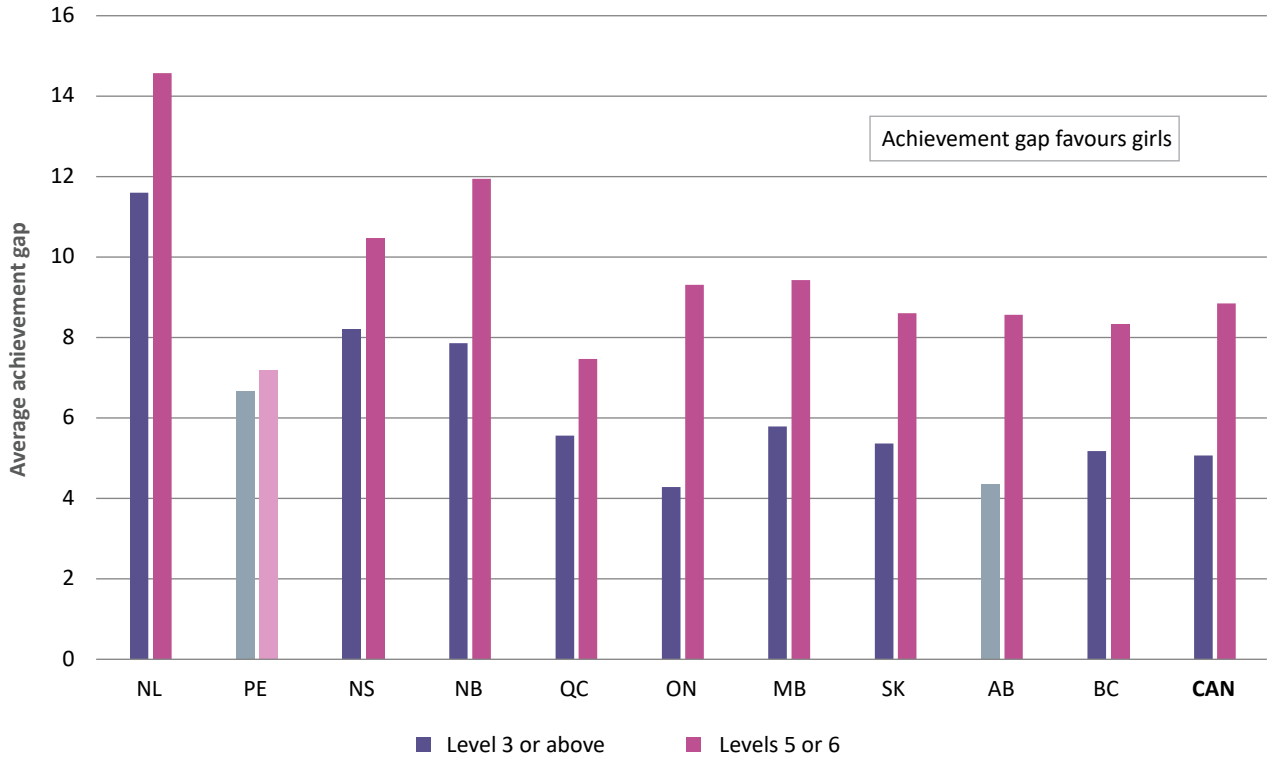


Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

A higher proportion of girls than boys achieved Level 3 (baseline proficiency) and above in Canada overall and in all provinces except Alberta and Prince Edward Island, where the difference was not significant (Figure 1.8, Appendix B.1.8b). In Canada overall, 91 percent of girls reached Level 3 or above, compared to 86 percent of boys.

Figure 1.8

Achievement gap between Canadian girls and boys in creative thinking, by proficiency level



Note: "Achievement gap" signifies the difference between the proportion of girls and the proportion of boys performing at each proficiency level. Darker shades denote significant difference between girls and boys (G - B). Results for Canada and most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan) should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

In most provinces, the percentages of girls and boys achieving at or above Level 3 were similar to the percentages in Canada as a whole. Differences were found in Ontario, where a higher proportion of girls as well as boys performed at or above the baseline proficiency compared to the Canadian average. In Newfoundland and Labrador and New Brunswick, the proportion of boys performing at or above Level 3 was lower than the Canadian average (Table 1.7, Appendix B.1.8b).

Table 1.7

Comparison of Canadian and provincial results for percentage of students achieving at or above Level 3 in creative thinking, by gender

Girls		
Higher* percentage than Canada	**The same percentage as Canada**	**Lower* percentage than Canada**
Ontario	Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Manitoba, Saskatchewan, Alberta, British Columbia	
Boys		
Higher* percentage than Canada	**The same percentage as Canada**	**Lower* percentage than Canada**
Ontario	Prince Edward Island, Nova Scotia, Quebec, Manitoba, Saskatchewan, Alberta, British Columbia	Newfoundland and Labrador, New Brunswick

* Denotes significant difference.
Note: Results for Canada and most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan) should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement by average score and gender

In Canada overall and on average across OECD countries, girls had higher scores than boys in creative thinking. In Canada, girls achieved an average score of 39 points, while boys achieved an average score of 37 points; across OECD, the average scores were 34 points for girls and 31 points for boys (Appendix B.1.9).

Table 1.8 presents a comparison of Canadian, provincial, and OECD average achievement scores in creative thinking for girls and boys. Both girls and boys in Ontario and Alberta scored above the respective Canadian averages. Both girls and boys in Prince Edward Island and British Columbia had achievement scores similar to the Canadian averages; in addition, in Nova Scotia, girls had scores similar to the Canadian average for girls. In all other provinces, and within OECD, both genders scored below the respective Canadian averages. (Appendix B.1.9).

Table 1.8

Comparison of Canadian, provincial, and OECD achievement scores in creative thinking, by gender

Girls			
Canadian average for girls	**Above* the Canadian average for girls**	**At the Canadian average for girls**	**Below* the Canadian average for girls**
39	Ontario (40), Alberta (41)	Prince Edward Island (37), Nova Scotia (37), British Columbia (39)	Newfoundland and Labrador (36), New Brunswick (36), Quebec (38), Manitoba (37), Saskatchewan (37), **OECD average (34)**
Boys			
Canadian average for boys	**Above* the Canadian average for boys**	**At the Canadian average for boys**	**Below* the Canadian average for boys**
37	Ontario (38), Alberta (38)	Prince Edward Island (34), British Columbia (37)	Newfoundland and Labrador (32), Nova Scotia (34), New Brunswick (33), Quebec (35), Manitoba (34), Saskatchewan (34), **OECD average (31)**

* Denotes significant difference.
Note: Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement in creative thinking and student characteristics

Immigrant status

PISA uses three categories to classify students in relation to immigrant status (OECD, 2019, p. 179):

- **Non-immigrant** students have at least one parent who was born in the country in which the assessment was administered, regardless of whether the student himself or herself was born in that country.
- **Second-generation immigrant** students were born in the country in which the assessment was administered but have foreign-born parents.
- **First-generation immigrant** students are foreign-born students whose parents are also foreign-born.

In PISA 2022, 34 percent of Canadian students self-identified as having an immigrant background, with the highest proportions in Ontario (42 percent) and Alberta (40 percent) (Elez et al., 2023). Historically, non-immigrant students have achieved higher test scores than immigrant students in the majority of countries participating in PISA (OECD, 2023b).[10] This trend was reflected in OECD averages in the creative thinking assessment, where students with an immigrant background scored over 4 points lower than non-immigrant students (29 points and 33 points, respectively) (Appendix B.1.10). In contrast, in Canada, there was no

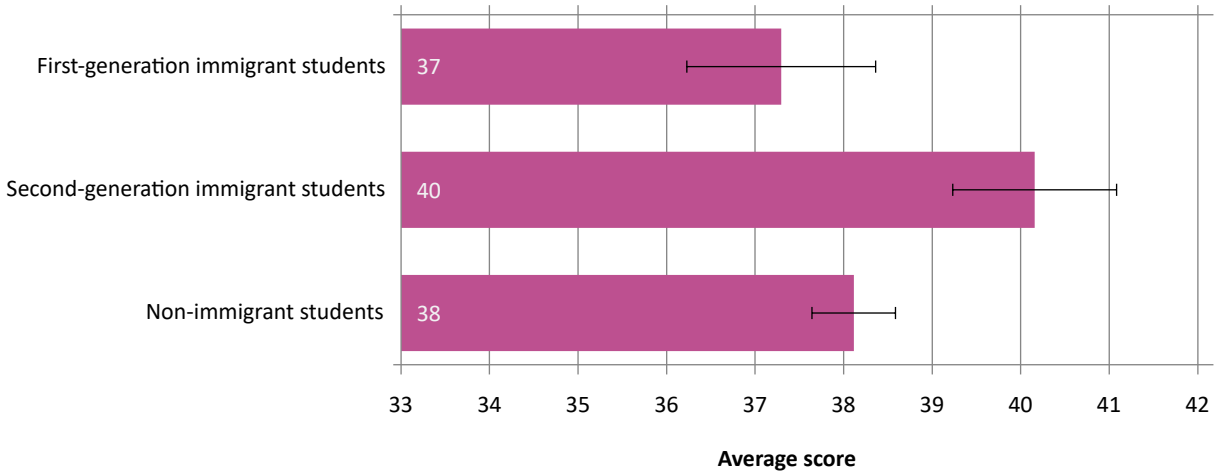
[10] This analysis excludes countries where less than 5 percent of students are immigrants.

significant difference between the average scores of immigrant students (39 points) and non-immigrant students (38 points). At the provincial level, the same trend was observed in most provinces, with the exceptions of Nova Scotia and Quebec (Appendix B.1.10).

While the difference between immigrant and non-immigrant students' scores in creative thinking is not significant at the pan-Canadian level, the differences become more pronounced when the immigrant group is split between first- and second-generation immigrants. As shown in Figure 1.9, second-generation immigrant students achieved an average score of 40 points, which is higher than first-generation and non-immigrant students, whose scores (37 and 38 points, respectively) were similar to each other. At the provincial level, there was no difference between the scores of non-immigrant students compared to first- or second-generation immigrant students in most provinces. Differences were observed only in Quebec, where both first- and second-generation immigrant students achieved a lower score than non-immigrant students, as well as in Ontario and British Columbia, where second-generation immigrant students achieved a higher score than non-immigrant students (Appendix B.1.10).

Figure 1.9

Average creative thinking scores in Canada, by immigrant status



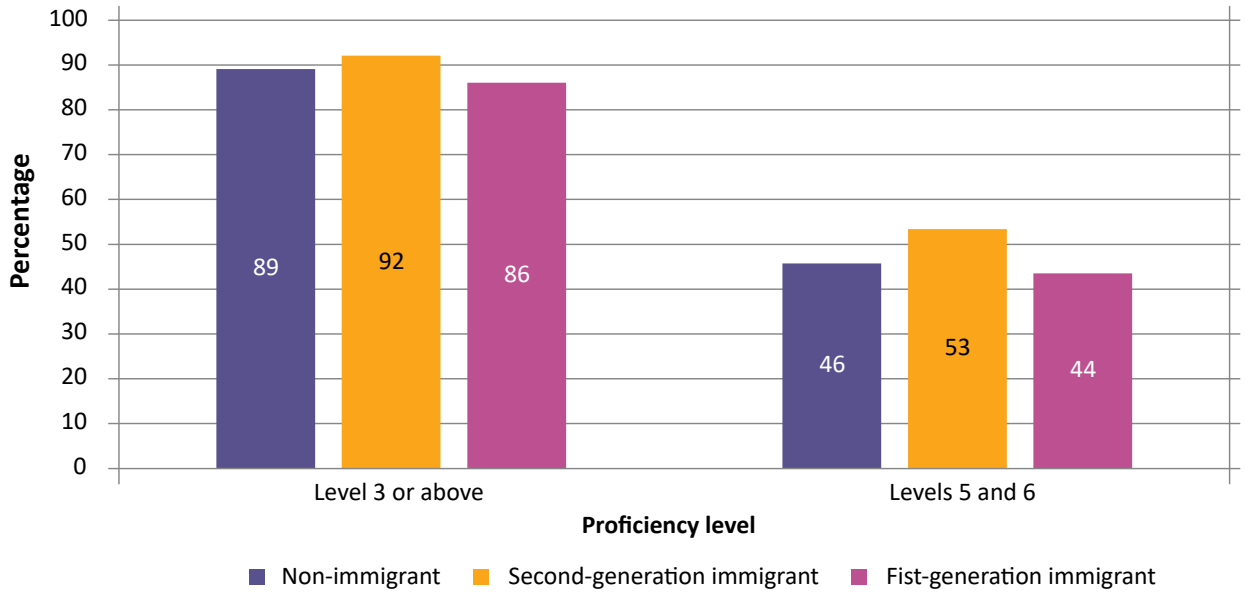
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details). Error bars represent 95 percent confidence intervals.

In Canada overall, 92 percent of second-generation immigrant students reached the baseline level of proficiency (Level 3) or above, which is significantly higher than the percentage of both non-immigrant students (89 percent) and first-generation immigrant students (86 percent). Among the provinces, this trend was observed only in Ontario. In all other provinces, there was no significant difference in the proportion of second-generation immigrant students reaching Level 3 or above compared to both non-immigrant and first-generation immigrant students (Appendix B.1.11).

Among high achievers (students reaching Levels 5 and 6), there was a gap in Canada overall of 10 percentage points between second- and first-generation immigrant students and 8 percentage points between second-generation and non-immigrant students (Appendix B.1.11). The only province in which the proportion of second-generation students at Levels 5 and 6 was larger than that of first-generation and non-immigrant students was Ontario. In Quebec, a greater proportion of non-immigrant students than first-generation immigrant students were high achievers. No differences among immigrant groups were evident in the other provinces.

Figure 1.10

Percentage of students in Canada at or above Level 3 and at Levels 5 and 6 in creative thinking, by immigrant status



Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Achievement by language spoken at home

In Canada, 64 percent of students participating in PISA 2022 reported in the student questionnaire that they spoke English at home, 17 percent reported that they spoke French at home, and 19 percent reported that they spoke a language other than English or French at home (Elez et al., 2023, p. 43). In the creative thinking assessment, there were no significant differences in the average scores of students in Canada overall when comparing students who reported that they spoke one of the two official languages (i.e., English or French) at home and those who reported that they spoke a language other than English or French at home. However, students who spoke English at home outperformed those who spoke French at home: francophone students had an average score of 37 points, while anglophone students had an average score of 38 points (Appendix B.1.12).

When student achievement was analyzed by the language spoken in the home, no differences were found in the proportions of students in Canada overall who performed at the baseline level of proficiency (Level 3) or above or those who were high achievers (performing at Levels 5 and 6) in creative thinking. At the provincial level, students in Quebec who spoke French at home reached both Level 3 or above and Levels 5 and 6 in higher proportions than students who spoke a language other than French or English at home. The only other difference among the provinces was in Manitoba, where a greater percentage of students who spoke English at home were high achievers, compared to their peers who spoke French at home (37 percent and 23 percent, respectively) (Appendix B.1.13).

Achievement by socioeconomic status

Socioeconomic status (SES), which comprises both cultural and economic factors, has often been represented by a complex cluster of variables that include parents' occupations, parents' educational attainment, learning resources in the home, and how parents communicate the value of education to their children, among other variables (Crowe, 2013; Chevalier et al., 2013).

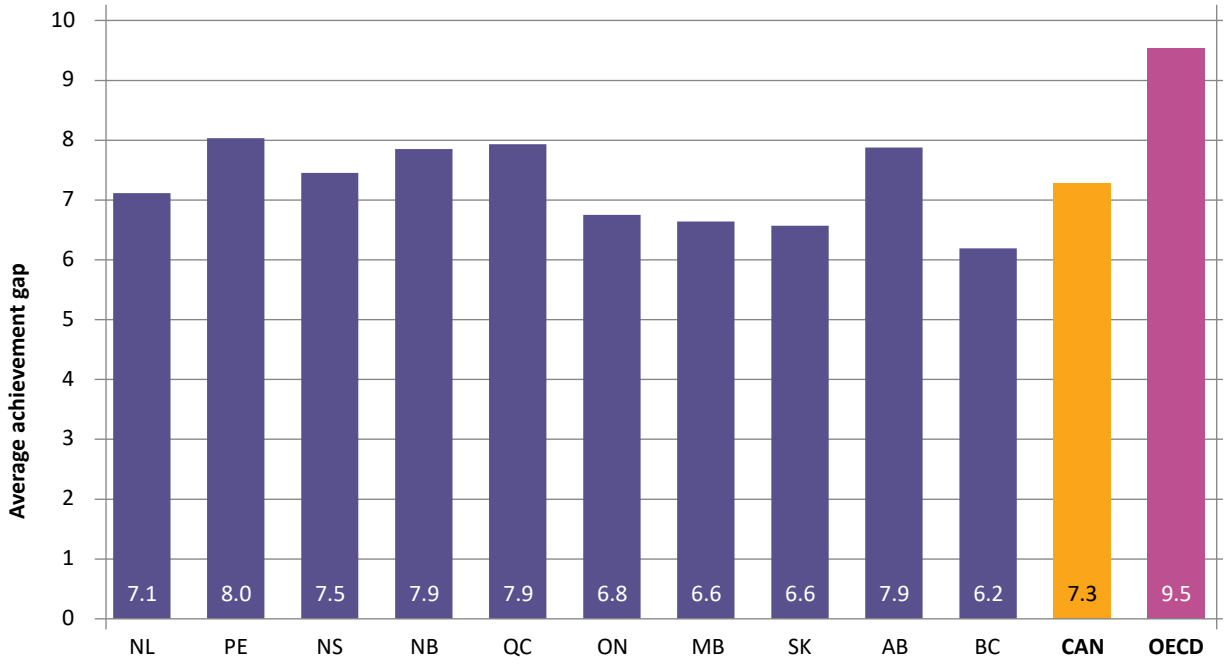
In PISA, SES is measured using the index of economic, social, and cultural status (ESCS). This index was constructed from the following variables, based on students' responses to the PISA 2022 student questionnaire: the highest occupational status of students' parents; the highest educational level attained by students' parents; and a number of home possessions that can be used as proxies for material wealth, including the number of books and other educational resources available in the home (OECD, 2019). It is important to underscore that "the link between socio-economic status and student achievement is neither absolute nor automatic, and should not be overstated" (OECD, 2016, p. 63).

A higher score on the ESCS index signifies higher average socioeconomic status. In PISA 2022, the ESCS index for Canada overall was 0.38, ranging from a high of 0.43 in British Columbia to a low of 0.18 in Manitoba (Elez et al., 2023, p. 37). For the purposes of reporting on student achievement in relation to the ESCS index, students in the top 25 percent (top quarter) of the index were defined as socioeconomically advantaged students, whereas those in the bottom 25 percent (bottom quarter) were defined as socioeconomically disadvantaged students (OECD, 2017).

Figure 1.11 presents the achievement gap in scores between socioeconomically advantaged and disadvantaged students among the provinces and in Canada overall, along with the OECD average. In Canada, socioeconomically advantaged students scored on average 7 points higher than students who were socioeconomically disadvantaged. This difference is lower than the OECD average: in participating OECD countries, on average, socioeconomically advantaged students scored 10 points higher than students who were socioeconomically disadvantaged. Differences were positive and statistically significant across all provinces as well as across all participating countries.

Figure 1.11

Achievement gap in creative thinking between socioeconomically advantaged and disadvantaged students



Note: Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

About 7 percent of the variation in creative thinking scores in Canada overall can be attributed to differences in socioeconomic status, compared to the OECD average of 12 percent. Provincially, the variation in overall creative thinking scores explained by socioeconomic status ranged from 5 percent in British Columbia to 8 percent in Prince Edward Island (Appendix B.1.14).

Summary

Canada performed well in the PISA 2022 creative thinking assessment, with 89 percent of Canadian students performing at Level 3 (the level considered by OECD to be the baseline level of proficiency) or above. Of the 64 participating countries, only 2 (Singapore and Latvia) had a greater proportion of students achieving at or above this level. In Canada, 21 percent of students reached the highest level of performance (Level 6), compared to the OECD average of 9 percent. The percentage of high achievers in creative thinking (students performing at Levels 5 and 6) was 45 percent in Canada overall, compared to the OECD average of 27 percent. Provincially, the proportion of high achievers ranged from 31 percent in Newfoundland and Labrador to 52 percent in Alberta. In terms of achievement scores, Canada ranked second among all participating countries, with an average of 38 points, tying with Korea (38) and Australia (37) and surpassed only by Singapore (41).

This chapter explored equity in Canada by looking at the difference between the mean scores of the lowest achievers (those in the 10th percentile) and the highest achievers (those in the 90th percentile). In Canada overall and on average across OECD countries, students in the highest decile scored 29 points higher than those in the lowest decile.

The correlation between performance in creative thinking and in the PISA core domains was lower in Canada overall compared to the OECD average. In other words, while performance in creative thinking was positively correlated with performance in the three core domains of mathematics, reading, and science, this correlation was not as strong in Canada as it was on average across OECD countries. Canadian students scored higher than expected in the creative thinking assessment based on their performance in mathematics, reading, and science.

This chapter explored performance in creative thinking in relation to a number of characteristics: language of the school system, gender, immigrant status, language spoken at home, and socioeconomic status.

Regarding language of the school system, there was a larger proportion of high achievers (students reaching Levels 5 and 6) and a smaller proportion of low achievers (students below Level 3) in creative thinking in anglophone school systems compared to francophone school systems in Canada overall. Students in anglophone systems also achieved a higher average score in creative thinking than students in francophone systems (38 points and 36 points, respectively).

Girls outperformed boys in creative thinking in all but 3 of the 64 participating countries, including Canada, and in all provinces except Prince Edward Island. On average in Canada, 91 percent of girls achieved Level 3 or above compared to 86 percent of boys. Girls also achieved a higher average score compared to boys in Canada overall (39 points and 37 points, respectively).

In OECD countries, on average, students with an immigrant background scored lower in creative thinking than students with a non-immigrant background, while in Canada there was no significant difference between the average scores of immigrant students (39 points) and non-immigrant students (38 points). However, in Canada overall, second-generation immigrant students achieved higher average scores than both non-immigrant and first-generation immigrant students. The proportions of second-generation immigrant students who achieved Level 3 or above and who achieved Levels 5 and 6 in creative thinking were also higher in Canada overall compared to the proportions of first-generation immigrant students and non-immigrant students reaching these

levels. On the other hand, in most provinces there was no difference in performance in relation to immigrant status.

No significant difference in scores was found in Canada overall between students who spoke one of the two official languages (i.e., English and French) at home and students who spoke another language at home. However, students who spoke English at home had higher average scores than those who spoke French at home. No significant difference was found among the language groups in the proportion of students achieving Level 3 or above in Canada.

Consistent with the results for the three core domains of PISA (mathematics, reading, and science), students from advantaged socioeconomic backgrounds (i.e., those in the top quarter of the PISA ESCS index) outperformed their disadvantaged peers (i.e., those in the bottom quarter of the ESCS index) in the creative thinking test. Differences were positive and statistically significant across all provinces as well as across all participating countries.

Chapter 2

A Profile of Students and Their Attitudes toward Creative Thinking

"Creativity is inventing, experimenting, growing, taking risks, breaking rules, making mistakes, and having fun."

– Mary Lou Cook

PISA creative thinking background questionnaires

In addition to the creative thinking cognitive test, the PISA 2022 assessment included background questionnaires to collect self-reported information from students, teachers, parents, and school principals about a range of beliefs and behaviours that researchers have identified as being important to creativity. In Canada, only the student and school principal questionnaires were administered. This chapter will focus on the findings from the student questionnaire. Exploring the responses to the student questionnaires can provide valuable insights for researchers, policy-makers, and educators about potential approaches to supporting and fostering creative thinking skills among students.

This chapter explores Canadian 15-year-old students' self-reported beliefs and attitudes regarding creativity and how these opinions relate to their achievement scores in the PISA 2022 creative thinking assessment. A word of caution is warranted about drawing conclusions about associations between students' attitudes and their achievement in creative thinking. It is important to note that these associations may be indirect, mediated by other important factors; or they may be spurious and reflect associations with a third, confounding, factor that influences the degree of proficiency in creative thinking and students' attitudes toward creativity.

Results are examined provincially, at the pan-Canadian level, and as averages across the 28 OECD member countries that both participated in the creative thinking student cognitive test and responded to the creative thinking portion of the student questionnaire.[11]

While the student questionnaire collected information on a range of attitudes, beliefs, and behaviours, this chapter focuses on the following five indices:

- creative self-efficacy (i.e., students' confidence levels about their ability to do tasks that involve creative thinking);
- openness to intellect (i.e., students' views on their own creativity and feelings about engaging in tasks involving creativity);
- student participation in creative activities at school;
- pedagogies encouraging creative thinking; and
- peer and family environments encouraging creative thinking.

These five indices were selected to provide an overarching summary of Canadian students' self-reported attitudes, beliefs, and behaviours regarding creative thinking and how these relate to their performance in the PISA 2022

[11] More OECD member countries responded to the student background questionnaire than participated in the creative thinking cognitive test (34 compared to 28, respectively). The OECD average in this report includes results from only the 28 OECD member countries that completed both components of the PISA 2022 creative thinking assessment: the cognitive test and the student background questionnaire.

creative thinking assessment. Information on additional indices is explored further in the OECD international report on the PISA creative thinking assessment (OECD, 2024).

Key findings

- Canadian students had higher scores than the OECD average in all five of the indices examined in this chapter.
- In Canada, as well as across OECD countries, higher scores in the indices for creative self-efficacy, openness to intellect, pedagogies encouraging creative thinking, and peer and family environments encouraging creative thinking are positively associated with creative thinking performance, after accounting for gender and student socioeconomic profile.
- While there is variation among provinces, girls and socioeconomically advantaged students (students in the top quarter of the economic, social, and cultural status [ESCS] index) had higher scores than boys and socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index) in Canada in the indices for creative self-efficacy, openness to intellect, participation in creative activities at their school, and peer and family environments encouraging creative thinking.
- Canadian students who reported never or almost never participating in creative activities at school had a higher average score in the creative thinking test compared to students who reported participating in creative activities at their school more often as well as those students who reported that these creative activities were not available at their school.
- More than three-quarters of Canadian students agreed or strongly agreed with statements affirming that creative thinking is fostered and supported by their peer and family environments.

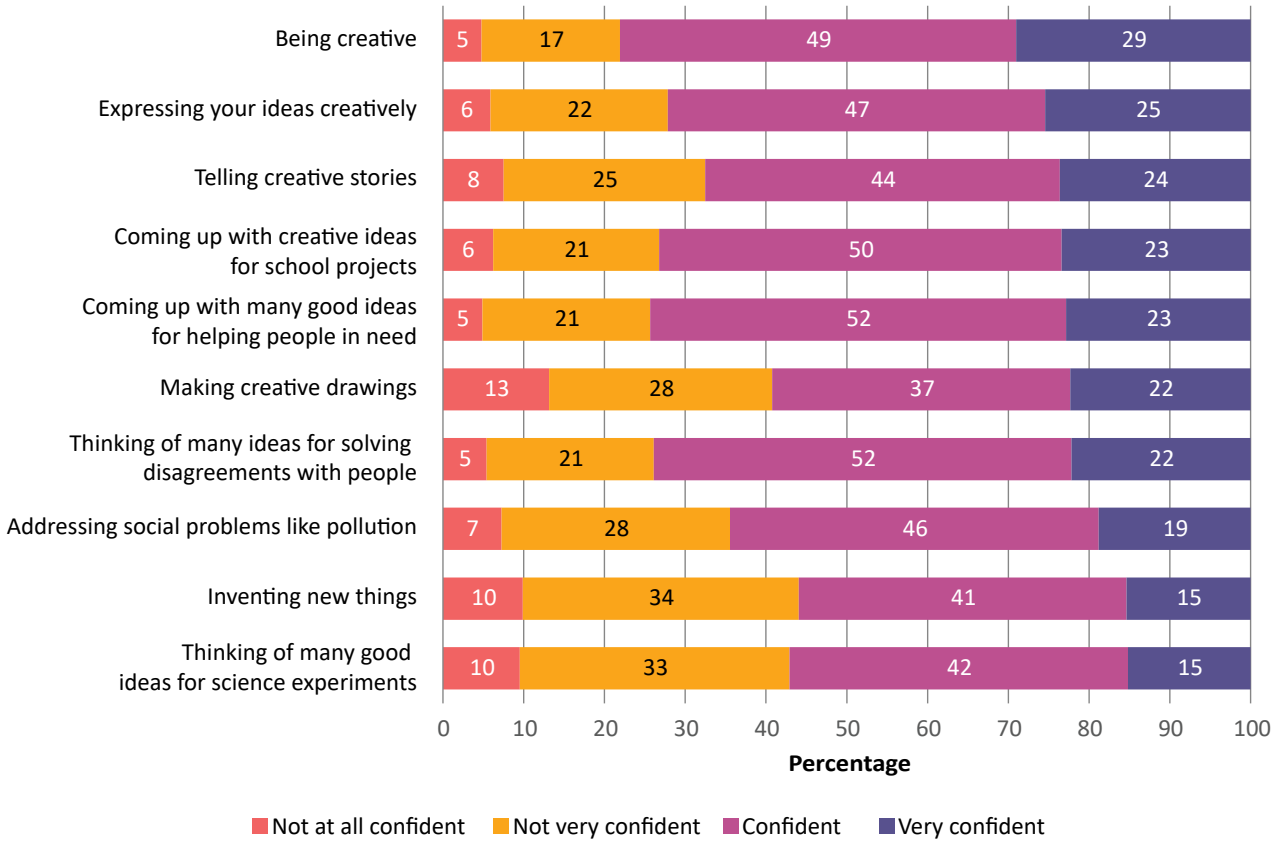
Index of creative self-efficacy

"Self-efficacy" can be described as the human ability to be efficient in one's actions as a result of one's confidence (Karwowski et al., 2013). Consequently, creative self-efficacy can be defined as a person's "beliefs that they have the capacity to be creative" (Royston & Reiter-Palmon, 2019, abstract). To measure their creative self-efficacy, the PISA 2022 student questionnaire asked students to self-report on how confident they felt about having to do a range of tasks reflective of creative thinking skills, such as "coming up with creative ideas for school projects" or "inventing new things" (see Figure 2.1 for the full list of statements).

In Canada, 78 percent of students self-reported feeling confident or very confident about "being creative," compared to 72 percent across OECD countries. At the provincial level, students reporting these levels of confidence ranged from 69 percent in Prince Edward Island to 83 percent in Quebec. Overall, Canadian students also reported high confidence levels with respect to "coming up with many good ideas for helping people in need," with 74 percent feeling confident or very confident, compared to the OECD average of 70 percent. On the other hand, only 56 percent of Canadian students self-reported feeling confident or very confident about "inventing new things," compared to the OECD average of 58 percent. At the provincial level, the proportion of students feeling confident or very confident about "inventing new things" ranged from 49 percent in Prince Edward Island to 67 percent in Quebec (Appendix B.2.1a).

Figure 2.1

Percentage of Canadian students by their self-reported confidence levels about engaging in tasks related to creative thinking



Note: Percentages may not add up at 100 due to rounding. Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

A positive relationship exists between students' confidence about doing most tasks related to creative thinking and their performance in the creative thinking assessment. Across OECD countries, students who reported feeling confident about doing tasks that involve creative thinking skills achieved scores from 2 to 5 points higher on the creative thinking test than students who reported feeling not at all confident about such tasks. The only exception was for "making creative drawings," where there was no difference in the scores for these two groups (Appendix B.2.1a). The same trends were also evident in Canada, with the additional exception of "inventing new things," where there was no difference in creative thinking scores between students who reported feeling confident and not at all confident (Table 2.1). At a provincial level, the same findings were observed in all provinces, with one exception: in Alberta, students who reported feeling not at all confident outperformed students who reported feeling confident about "making creative drawings" (42 points compared to 39 points, respectively) (Appendix B.2.1ae).

Table 2.1

Relationship between Canadian students' self-reported confidence levels about engaging in tasks related to creative thinking and creative thinking scores

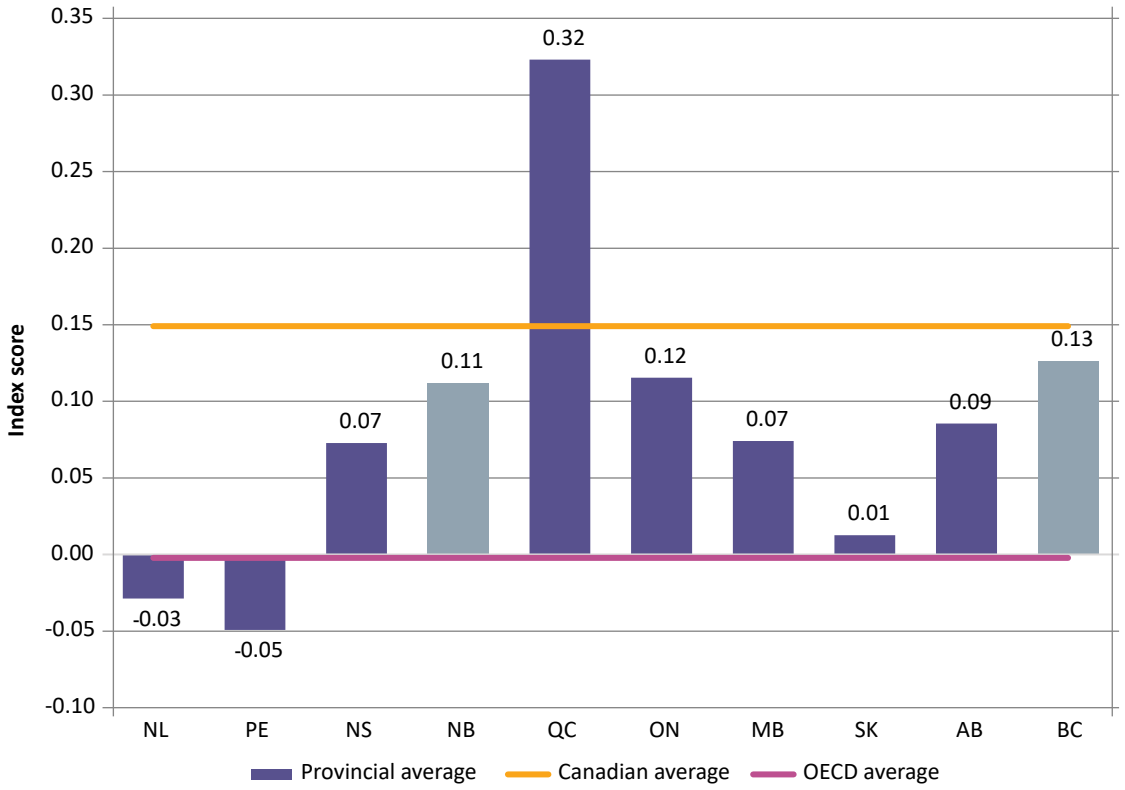
	Not at all confident	Not very confident	Confident	Very confident
Coming up with creative ideas for school projects	34*	38*	40	41
Being creative	36*	39	39	40
Telling creative stories	35*	39	39	41*
Expressing your ideas creatively	37*	38	39	40
Making creative drawings	39	39	38	40*
Thinking of many good ideas for science experiments	37*	39	39	40
Inventing new things	38	40	39	39
Thinking of many ideas for solving disagreements with people	34*	38*	39	41*
Addressing social problems like pollution	35*	39	39	40
Coming up with many good ideas for helping people in need	35*	39	39	40*

* Denotes a significant difference compared to the "Confident" category.
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

As shown in Figure 2.2, students in Canada overall had higher levels of creative self-efficacy, as measured by the index of creative self-efficacy, than the OECD average. Quebec is the only province that had a creative self-efficacy index score higher than the Canadian average (0.32 compared to 0.15, respectively), while two provinces (New Brunswick and British Columbia) scored at the Canadian average. The remaining seven provinces had lower index scores than Canada overall (Appendix B.2.1b).

Figure 2.2

Average scores on the index of creative self-efficacy



Note : Darker shade denotes significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When creative self-efficacy index scores are explored by various sociodemographic factors, consistent trends are observed on average in Canada with regard to language of the school system, gender, immigrant status, and socioeconomic status. In five provinces (Nova Scotia, Quebec, Ontario, Saskatchewan, and Alberta) and Canada overall, students in French-language schools had higher creative self-efficacy index scores than their counterparts in English-language school systems. In every province, in Canada overall, as well as on average across OECD countries, socioeconomically advantaged students (those in the top quarter of the ESCS index) had higher levels of creative self-efficacy compared to socioeconomically disadvantaged students (those in the bottom quarter of the ESCS index). In Newfoundland and Labrador, Quebec, Ontario, Manitoba, Saskatchewan, British Columbia, in Canada overall, and on average across OECD countries, girls had higher levels of creative self-efficacy compared to boys. Quebec is the only province where non-immigrant students had higher levels of creative self-efficacy than immigrant students; the same trend was evident in Canada overall (Table 2.2, Appendix B.2.1b).

Table 2.2

Differences in scores on the index of creative self-efficacy, by sociodemographic characteristics

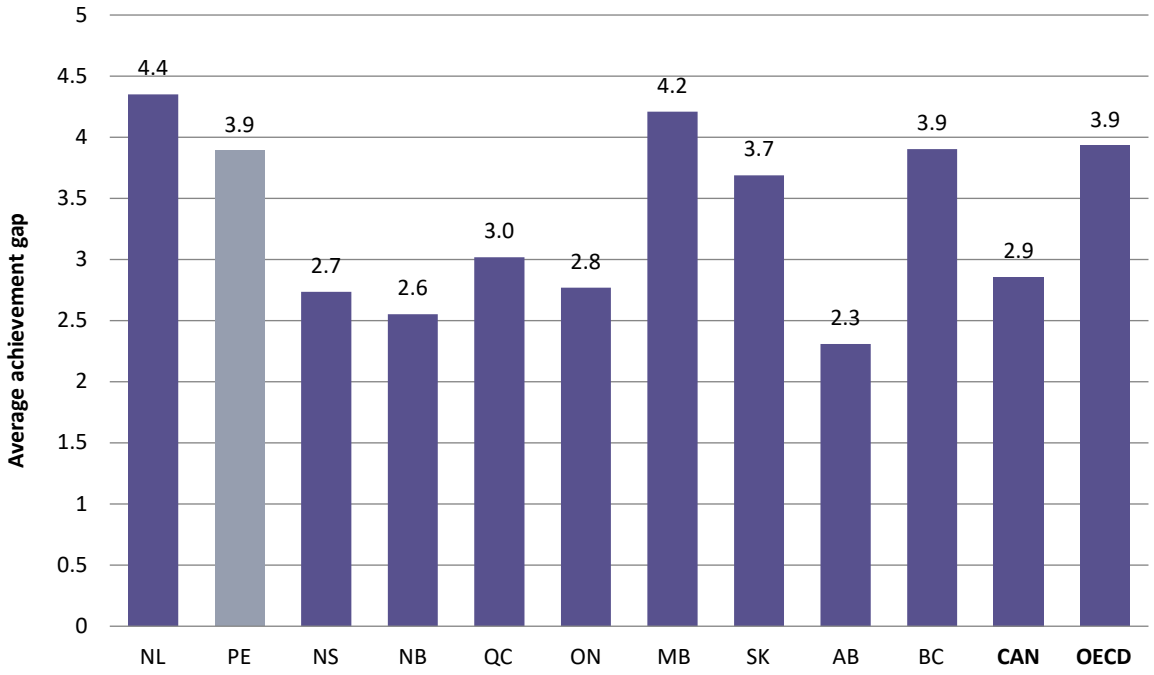
	Anglophone - francophone students	Girls - boys	Immigrant - non-immigrant students	Top - bottom quarter of ESCS
Newfoundland and Labrador	--	0.16*	0.05	0.47*
Prince Edward Island	--	0.22	-0.17	0.48*
Nova Scotia	-0.23*	0.02	0.14	0.28*
New Brunswick	-0.11	0.08	0.05	0.49*
Quebec	-0.29*	0.18*	-0.11*	0.30*
Ontario	-0.15*	0.11*	0.00	0.39*
Manitoba	-0.16	0.16*	0.08	0.40*
Saskatchewan	-0.35*	0.23*	-0.02	0.49*
Alberta	-0.41*	0.07	-0.06	0.36*
British Columbia	--	0.18*	-0.02	0.33*
Canada	**-0.25***	**0.13***	**-0.04***	**0.37***
OECD average	**--**	**0.05***	**0.00**	**0.36***

-- Not available.
* Denotes a significant difference within a province, Canada, or OECD.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Figure 2.3 shows the difference in creative thinking performance between students in the top quarter (i.e., highest confidence levels) and those in the bottom quarter (i.e., lowest levels of confidence) of the creative self-efficacy index. Canadian students who reported feeling more confident with completing creative thinking tasks scored 3 points higher than students who reported low levels of confidence, which is a smaller achievement gap than the OECD average of 4 points (Appendix B.2.1c).

Figure 2.3

Difference in creative thinking performance between students in the top quarter and the bottom quarter of the index of creative self-efficacy



Note: Darker shade denotes significant difference within a province, Canada, or OECD. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

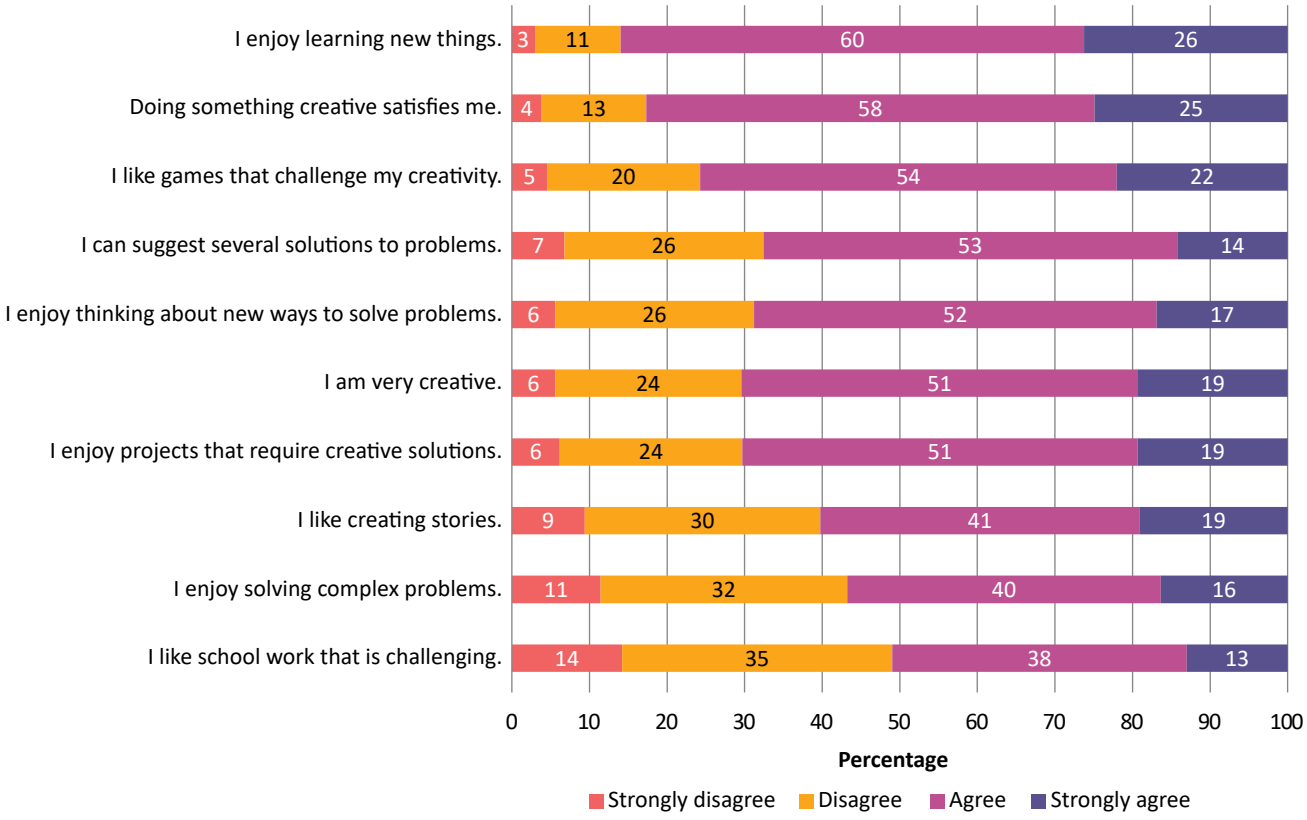
Index of openness to intellect

"Openness to intellect" is the dimension of human personality that allows an individual to use reasoning while engaging with abstract information (Kaufman et al., 2016). This dimension is often associated with creativity and imagination, as individuals who display high levels of openness to intellect are more likely than those with low levels to seek, identify, understand, and use information (DeYoung et al., 2014).

In the student questionnaire, students were asked about the extent of their agreement with the statements listed in Figure 2.4 about their own views on their openness to intellect, mostly in the context of tasks involving creativity. In Canada overall, 86 percent of students agreed or strongly agreed with the statement "I enjoy learning new things," while only 51 percent agree or strongly agree with the statement "I like school work that is challenging" (Figure 2.4, Appendix B.2.2a).

Figure 2.4

Percentage of Canadian students by their agreement levels with statements regarding their openness to intellect



Note: Percentages may not add up at 100 due to rounding. Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

In Canada, a positive relationship exists between high levels of students' self-reported openness to intellect and their creative thinking performance. Students who agreed with each of the ten statements regarding their openness to intellect outperformed students who strongly disagreed with the statements, with a range from 2 to 7 points, depending on the particular statement (Table 2.3, Appendix B.2.2a). For example, at the pan-Canadian level, a difference of 7 points was observed between students who agreed and those who strongly disagreed with the statement "I enjoy learning new things" (39 and 32 points, respectively). A significant difference in scores can also be seen in relation to this statement in four provinces (Quebec, Ontario, Manitoba, and Saskatchewan) as well as on average across OECD countries (Appendix B.2.2aj).

Table 2.3

Relationship between Canadian students' agreement with statements about their openness to intellect and creative thinking scores

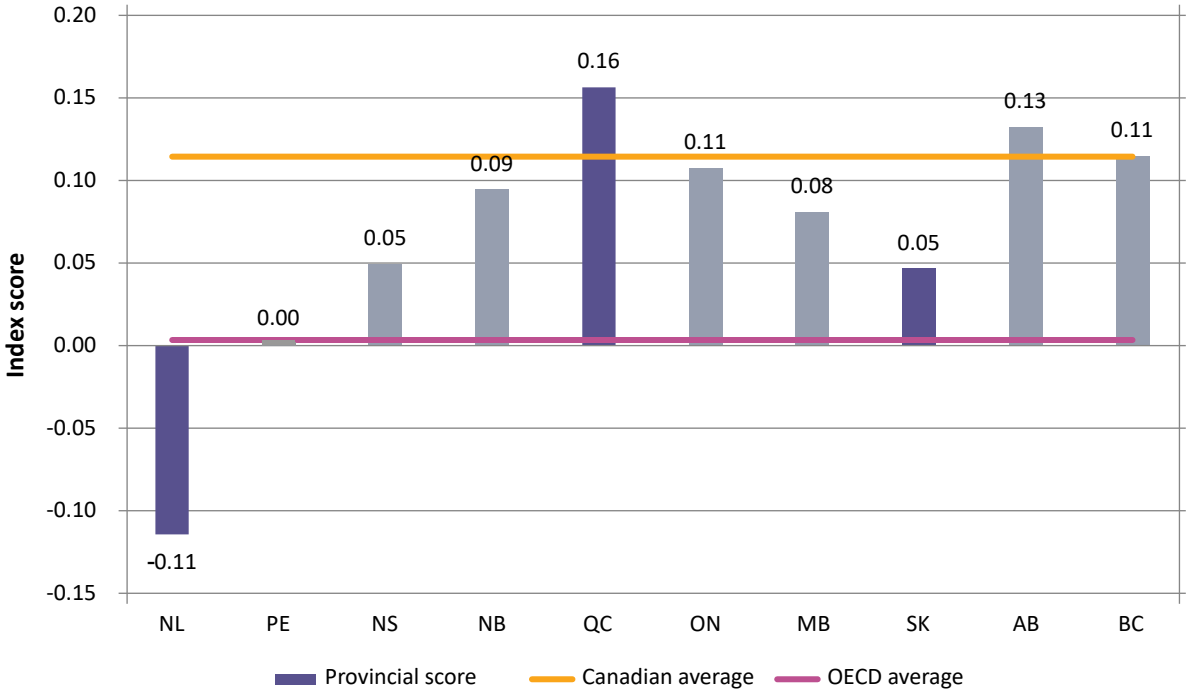
	Strongly disagree	Disagree	Agree	Strongly agree
Doing something creative satisfies me.	34*	38*	39	41*
I am very creative.	36*	39	39	40*
I like creating stories.	37*	38	39	41*
I like games that challenge my creativity.	34*	37*	39	40
I enjoy projects that require creative solutions.	35*	38	39	41*
I enjoy thinking about new ways to solve problems.	34*	39	39	41*
I enjoy solving complex problems.	35*	38	39	42*
I like school work that is challenging.	36*	39	40	41
I can suggest several solutions to problems.	34*	38*	40	41
I enjoy learning new things	32*	37*	39	40*

* Denotes a significant difference compared to the "Agree" category.
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

From an international perspective, students in Canada had relatively high levels of openness to intellect, with an average index score of 0.11, compared to the OECD average of 0.00 (Figure 2.5). Within Canada, there were notable variations between provinces: index scores ranged from -0.11 in Newfoundland and Labrador to 0.16 in Quebec (Appendix B.2.2b).

Figure 2.5

Average scores on the index of openness to intellect



Note: Darker shade denotes significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When openness to intellect index scores are examined by sociodemographic characteristics, consistent trends can be observed in Canada overall and on average across OECD countries. Girls, immigrant students, and socioeconomically advantaged students (those in the top quarter of the ESCS index) had higher levels of openness to intellect than their respective counterparts on average across Canada and OECD countries (Table 2.4).

At the provincial level, there was no difference between boys and girls in index scores for students' openness to intellect. On the other hand, in all ten provinces, socioeconomically advantaged students had higher openness to intellect index values than socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index). At the pan-Canadian level, students in French-language school systems had higher levels of openness to intellect than students in English-language school systems. This finding was also observed in four provinces: Nova Scotia, Quebec, Saskatchewan, and Alberta. Immigrant students had higher levels of openness to intellect than non-immigrant students in four provinces (Ontario, Manitoba, Saskatchewan, and British Columbia) (Table 2.4, Appendix B.2.2b).

Table 2.4

Differences in scores on the index of openness to intellect, by sociodemographic characteristics

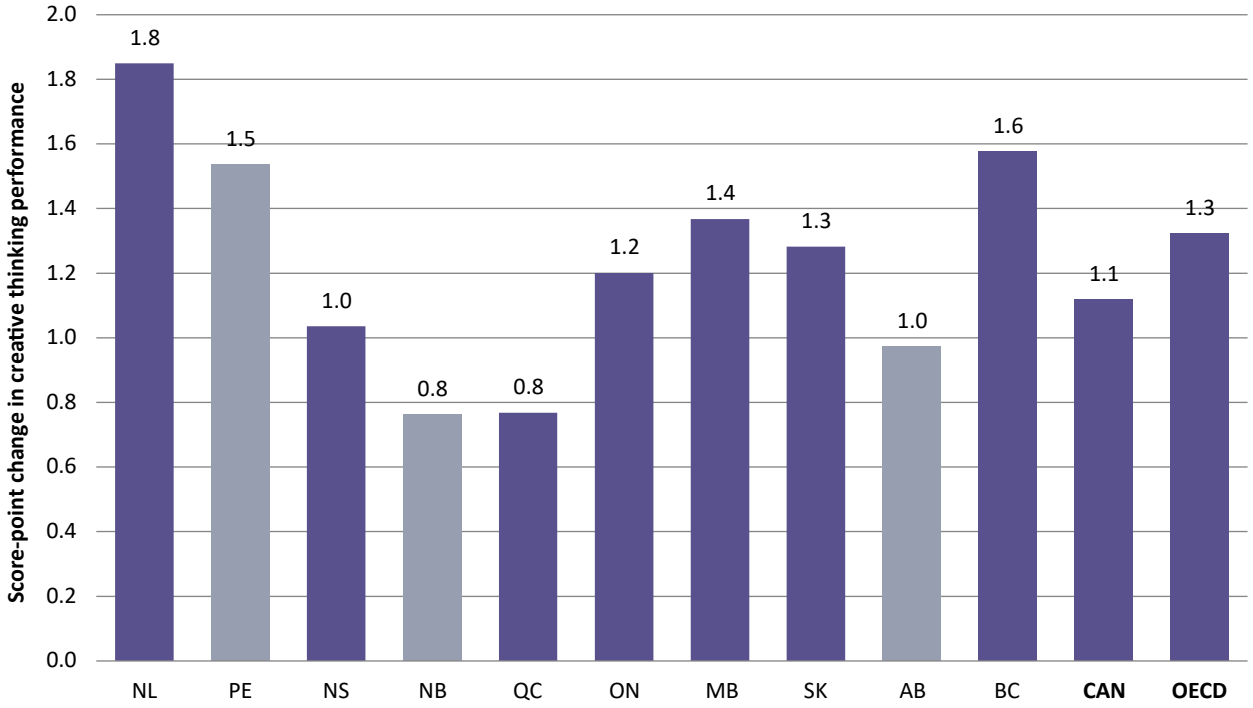
	Anglophone - francophone students	Girls - boys	Immigrant - non-immigrant students	Top - bottom quarter of ESCS
Newfoundland and Labrador	--	0.06	0.09	0.41*
Prince Edward Island	--	0.23	-0.17	0.51*
Nova Scotia	-0.22*	0.00	0.12	0.40*
New Brunswick	0.09	-0.02	0.19	0.41*
Quebec	-0.12*	0.05	-0.04	0.39*
Ontario	-0.02	0.02	0.13*	0.31*
Manitoba	-0.09	0.01	0.18*	0.21*
Saskatchewan	-0.51*	0.05	0.12*	0.31*
Alberta		0.06	0.07	0.47*
British Columbia	--	0.07	0.17*	0.37*
Canada	**-0.06***	**0.04***	**0.09***	**0.37***
OECD average	**--**	**0.02***	**0.05***	**0.36***

-- Not available.
* Denotes a significant difference within a province, Canada, or OECD.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Figure 2.6 shows how a one-unit change in students' openness to intellect index score (i.e., a change of 1 point on the index score) is related to their creative thinking performance, after accounting for gender and student socioeconomic profile. Across Canada and OECD countries on average, a positive relationship was found between students' openness to intellect and their creative thinking performance. A one-unit increase in the index of openness to intellect was associated with a 1.1-point increase in creative thinking achievement in Canada and a 1.3-point increase in OECD countries on average. This positive relationship was found in all provinces except Prince Edward Island, New Brunswick, and Alberta, where the difference was not statistically significant. Provincially, the changes ranged from a 0.8-point increase in the creative thinking scores in New Brunswick and Quebec to a 1.8-point increase in Newfoundland and Labrador (Figure 2.6, Appendix B.2.2c).

Figure 2.6

Relationship between creative thinking performance and a one-unit change in the index of openness to intellect (after accounting for gender and student socioeconomic profile)



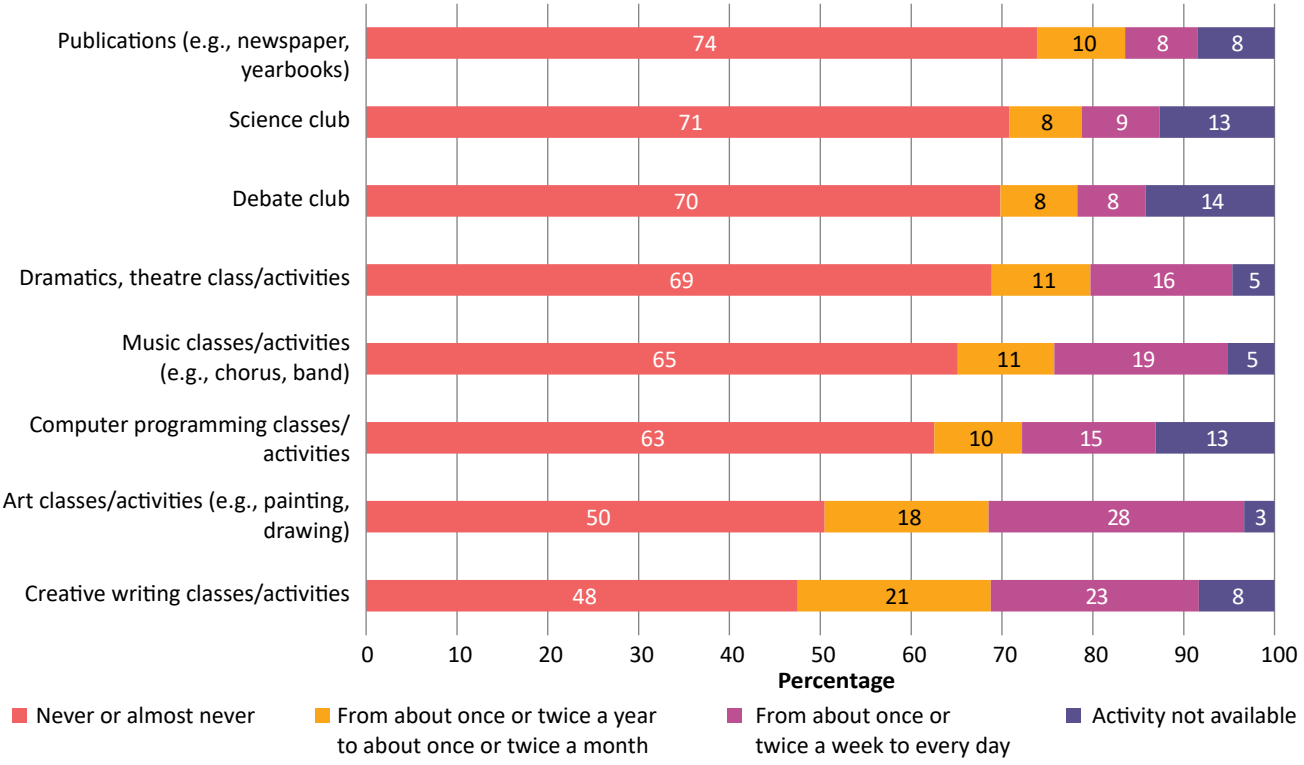
Note : Darker shade denotes significant difference within a province, Canada, or OECD. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Index of student participation in creative activities at school

The student questionnaire asked students about their participation levels in eight different creative activities at their school, such as music classes/activities and debate clubs (see Figure 2.7). In Canada, 28 percent of students reported participating in art classes/activities at school from about once or twice a week to every day (Figure 2.7). At the provincial level, participation at that level of frequency ranged from 18 percent in Prince Edward Island to 41 percent in Nova Scotia. Students also reported whether an activity was not available at their school. More than 1 in 10 Canadian students reported that a debate club (14 percent), a science club (13 percent), and computer programming classes/activities (13 percent) were not offered in their schools. Provincially, the proportion of students who reported that a debate club was not available in their school ranged from 9 percent of students in Ontario to 25 percent in Newfoundland and Labrador and Quebec (Appendix B.2.3a).

Figure 2.7

Percentage of Canadian students by their participation in creative activities available in their school



Note: Percentages may not add up at 100 due to rounding. Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

What is the relationship between students' participation in creative activities at school and their creative thinking performance? Canadian students who reported never or almost never participating in creative activities at school scored higher in the creative thinking cognitive test compared to students who reported participating in these activities from about once or twice per week to every day (Table 2.5, Appendix B.2.3a). For the most part, a similar trend was observed on average across OECD countries. It is important to note that this trend does not take into consideration student characteristics and their performance in other domains; it may therefore be related to the characteristics of students who frequently participate in creative activities at school. After accounting for students' and schools' characteristics, as well as students' mathematics and reading performance, no strong association was found between participation in creative activities at school and creative thinking performance in the majority of participating countries (OECD, 2024, p. 196).

Table 2.5

Relationship between Canadian students' participation in creative activities in their school and creative thinking scores

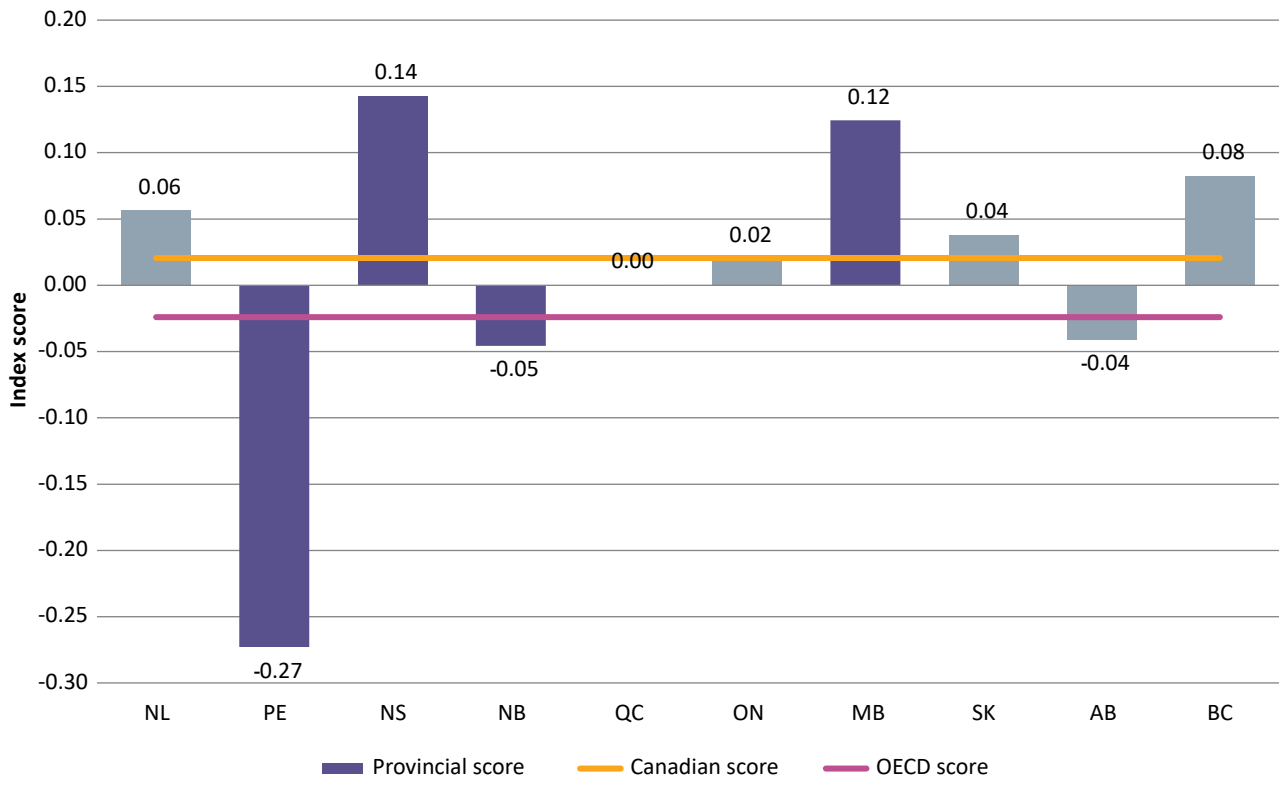
	Never or almost never	From about once or twice a year to about once or twice a month	From about once or twice a week to every day	Activity not available
Art classes/activities (e.g., painting, drawing)	40	38*	39*	35*
Creative writing classes/activities	39	39	38*	39
Music classes/activities (e.g., chorus, band)	40	37*	39*	36*
Debate club	40	37*	35*	39
Dramatics, theatre class/activities	40	38*	38*	36*
Publications (e.g., newspaper, yearbooks, literary magazine)	40	38*	35*	38*
Science club	40	37*	36*	39
Computer programming classes/activities	39	38*	38*	35*

* Denotes significant difference compared to the average score in the "Never or almost never" category.
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

As shown in Figure 2.8, Canadian students had higher scores than the OECD average on the index of student participation in creative activities at school (0.02 and -0.02, respectively). Results varied among the provinces, with Nova Scotia (0.14) and Manitoba (0.12) reporting higher levels of student participation in creative activities at their school than the Canadian average. Students in two provinces, Prince Edward Island (-0.27) and New Brunswick (-0.05), reported lower levels of student participation in such activities compared to the Canadian average (Figure 2.8, Appendix B.2.3b).

Figure 2.8

Average scores on the index of student participation in creative activities at school



Note: Darker shade denotes significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When index scores for students' participation in creative activities at school are examined with regard to sociodemographic characteristics, results for Canada and OECD were similar for only one variable: immigrant students had higher index scores than non-immigrant students (0.08 in Canada and 0.15 on average across OECD countries). This finding was also observed in three provinces, New Brunswick (0.35), Ontario (0.12), and British Columbia (0.12). While girls and socioeconomically advantaged students (students in the top quarter of the ESCS index) had higher index scores for participation in creative activities at school than boys and socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index) in Canada, the opposite was true across OECD countries on average (Table 2.6, Appendix B.2.3b).

At the provincial level, girls had higher index scores than boys for participation in creative activities at school in Prince Edward Island (0.35), Saskatchewan (0.12), Alberta (0.15), and British Columbia (0.16). In five provinces (Prince Edward Island, Ontario, Manitoba, Saskatchewan, and British Columbia), socioeconomically advantaged students had higher index scores for participation in creative activities at school than socioeconomically disadvantaged students. The opposite was true in Newfoundland and Labrador, where socioeconomically disadvantaged students had higher index scores for participation in these activities than socioeconomically advantaged students (Table 2.6, Appendix B.2.3b).

In Canada overall, no difference was found between anglophone and francophone students in index scores for student participation in creative activities at school. However, in two provinces (New Brunswick and Quebec), students in English-language school systems had higher scores on this index than students in French-language school systems, while the opposite was true in Alberta (Table 2.6, Appendix B.2.3b).

Table 2.6

Differences in scores on the index of student participation in creative activities at school, by sociodemographic characteristics

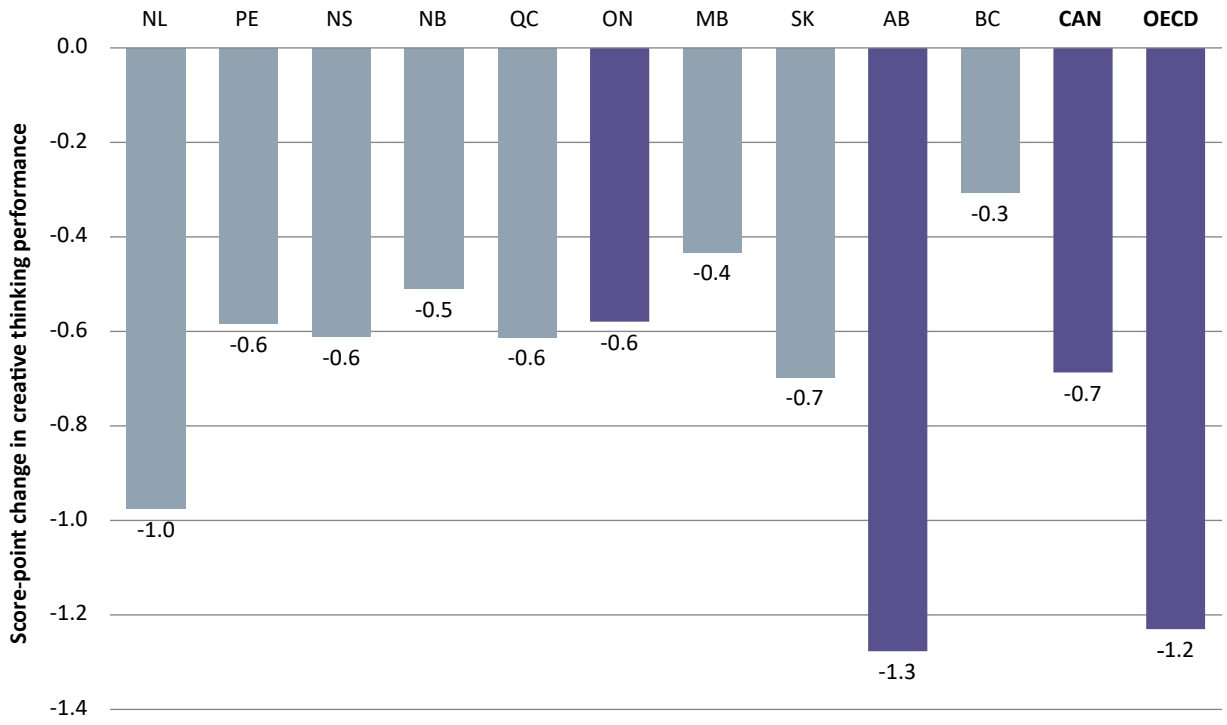
	Anglophone - francophone students	Girls - boys	Immigrant - non-immigrant students	Top - bottom quarter of ESCS
Newfoundland and Labrador	--	0.04	0.11	-0.44*
Prince Edward Island	--	0.35*	0.20	0.33*
Nova Scotia	0.17	0.04	0.11	0.12
New Brunswick	0.32*	0.09	0.35*	-0.16
Quebec	0.20*	-0.02	0.01	-0.05
Ontario	-0.04	0.03	0.12*	0.18*
Manitoba	-0.12	0.07	0.06	0.13*
Saskatchewan	-0.16	0.12*	0.11	0.16*
Alberta	-0.25*	0.15*	0.06	0.08
British Columbia	--	0.16*	0.12*	0.15*
Canada	**0.05**	**0.06***	**0.08***	**0.10***
OECD average	**--**	**-0.07***	**0.15***	**-0.03***

-- Not available.
* Denotes a significant difference within a province, Canada, or OECD.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

The association between student participation in creative activities at school and creative thinking performance is presented in Figure 2.9. After accounting for gender and student socioeconomic profile, a one-unit change in the index of student participation in creative activities at school was related to a negative change in their creative thinking performance, on average across OECD countries (-1.2) and in Canada overall (-0.7). At the provincial level, a negative association was observed in two provinces, Ontario (-0.6) and Alberta (-1.3), while in the remaining provinces the difference was not statistically significant (Figure 2.9, Appendix B.2.3c).

Figure 2.9

Relationship between creative thinking performance and a one-unit change in the index of student participation in creative activities at school (after accounting for gender and student socioeconomic profile)



Note: Darker shade denotes a significant difference within Canada, province, or OECD. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Index of pedagogies encouraging creative thinking

As education systems around the world prepare young generations for a future filled with unprecedented changes in technological, environmental, social, and economic conditions, it is important to explore how soft skills, such as creative thinking, are being supported in classrooms and schools. After all, there is ample evidence that children's pedagogical environment as well as their relationships with teachers can have an impactful role in promoting creativity (Davies et al., 2013).

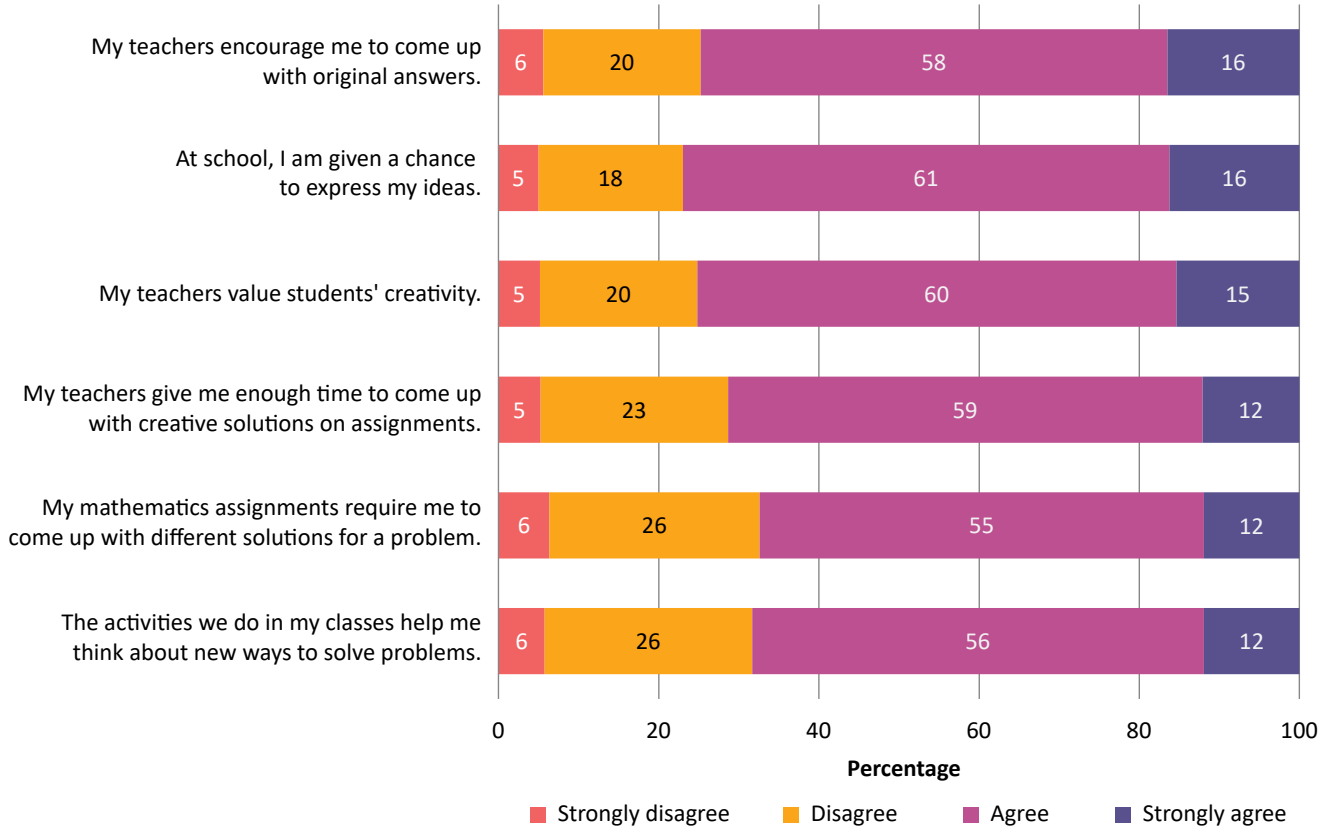
The index of pedagogies encouraging creative thinking is based on students' levels of agreement with the six statements about how their creative thinking is supported in their school and classroom (see Figure 2.10). In Canada, approximately three-quarters of students agreed or strongly agreed with the following statements: "My teachers encourage me to come up with original answers"; "At school, I am given a chance to express my ideas"; and "My teachers value students' creativity." In comparison, the OECD averages were 64 percent, 70 percent, and 71 percent, respectively. At the provincial level, the proportion of students who agreed or strongly agreed with these statements varied. For example, the proportion who agreed or strongly agreed that "My teachers encourage me to come up with original answers" ranged from 62 percent in Quebec to 80 percent in Alberta and Saskatchewan (Appendix B.2.4a).

At the same time, at the pan-Canadian level, close to one-third of Canadian students disagreed or strongly disagreed with the statements "My mathematics assignments require me to come up with different solutions

for a problem" and "The activities we do in my classes help me think about new ways to solve problems" (Figure 2.10). At the provincial level, the proportion of students who disagreed or strongly disagreed with the statement "My mathematics assignments require me to come up with different solutions for a problem" ranged from 28 percent in Saskatchewan to 40 percent in Newfoundland and Labrador and Prince Edward Island (Appendix B.2.4ad).

Figure 2.10

Percentage of Canadian students by their agreement with statements about how creative thinking is fostered and supported in their school and class environments

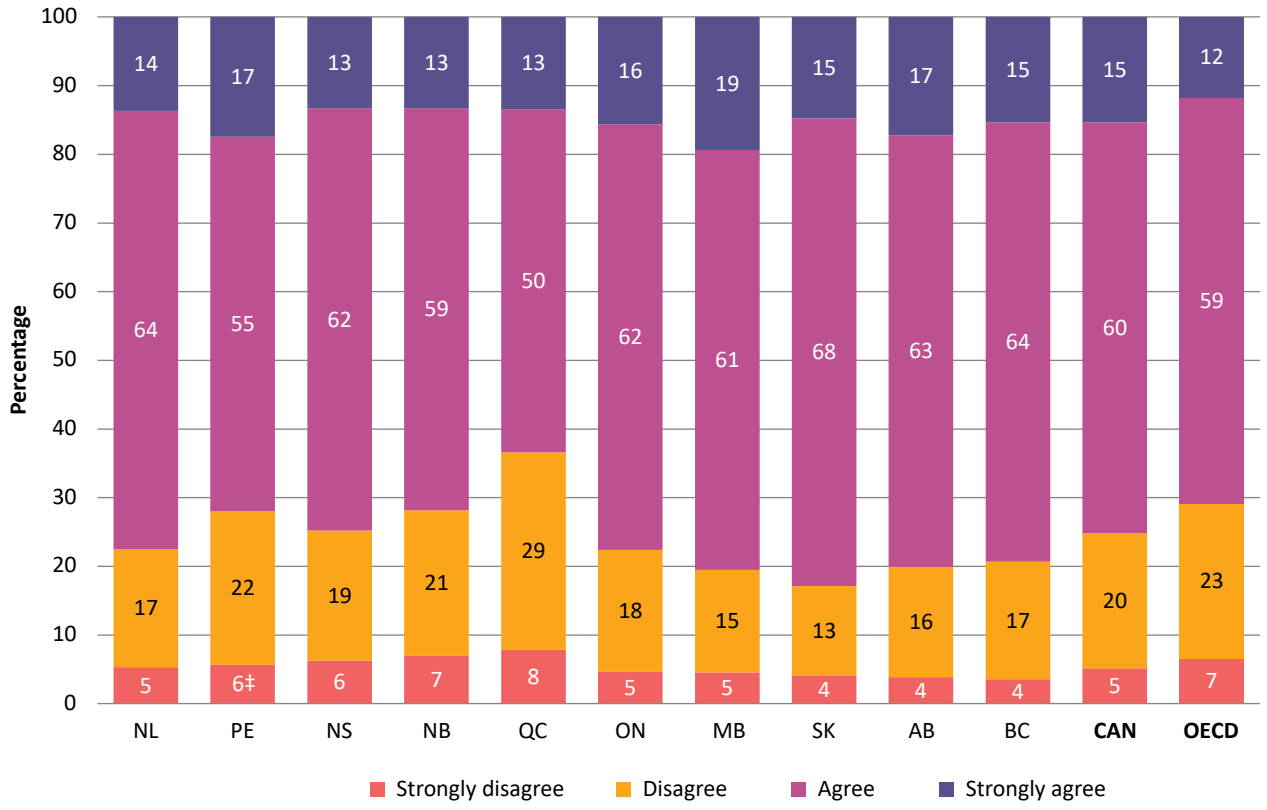


Note: Percentages may not add up at 100 due to rounding. Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Figure 2.11 presents students' levels of agreement with the statement "My teachers value students' creativity" at the provincial, pan-Canadian, and OECD levels. In Canada, 75 percent of students agreed or strongly agreed with this statement, compared to the OECD average of 71 percent. At the provincial level, agreement or strong agreement with this statement ranged from 63 percent in Quebec to 83 percent in Saskatchewan (Appendix B.2.4a).

Figure 2.11

Percentage of students by agreement with the statement "My teachers value students' creativity"



‡ Denotes fewer than 30 observations.
Note: Percentages may not add up at 100 due to rounding. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

At the pan-Canadian level, students who agreed with the statements about how creativity was supported in their class and school environments performed better in the creative thinking assessment than those who strongly disagreed with these statements, with one exception: there was no difference in the scores of these two groups in relation to the statement "My mathematics assignments require me to come up with different solutions for a problem" (Table 2.7). The only province where there was a difference in creative thinking scores between students who agreed and those who strongly disagreed with this statement on mathematics assignments was Ontario, where there was a difference of 3 score points favouring students who agreed with this statement (Appendix B.2.4a).

Table 2.7

Relationship between Canadian students' agreement with statements about how creative thinking is fostered and supported in their school and class environments and creative thinking scores

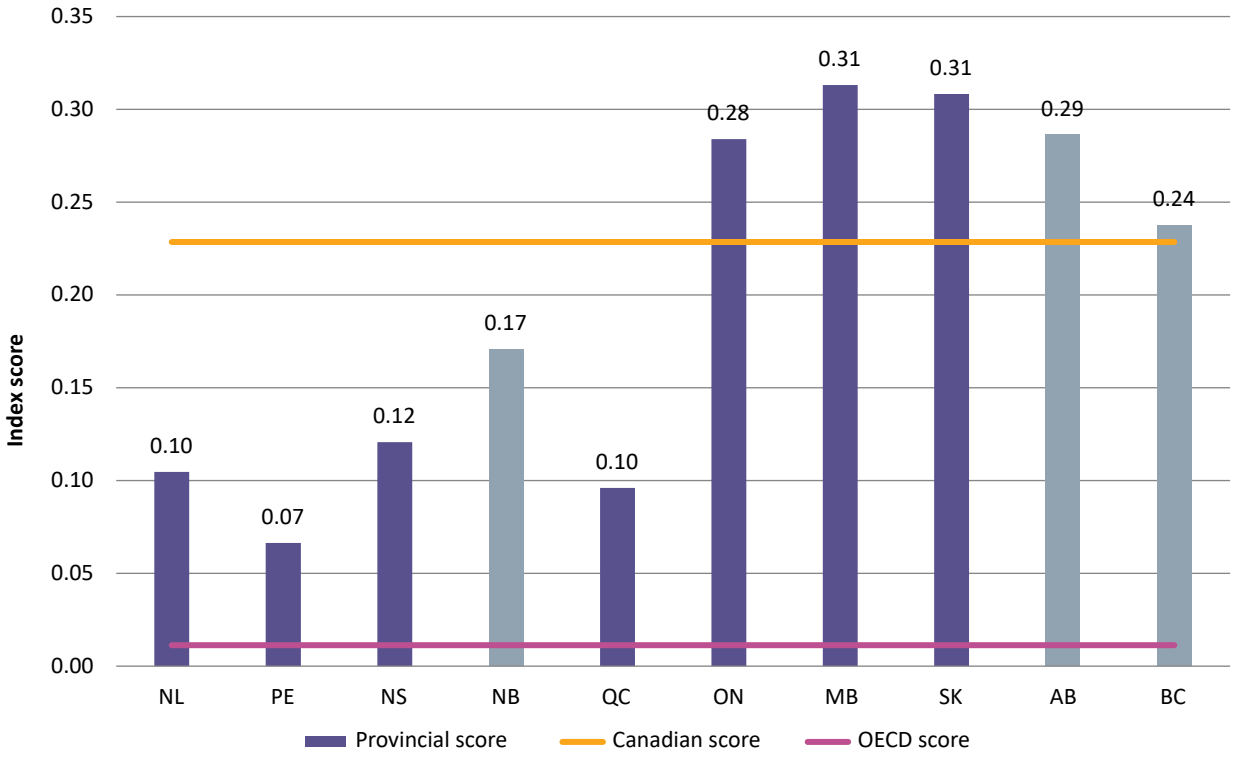
	Strongly disagree	Disagree	Agree	Strongly agree
My teachers give me enough time to come up with creative solutions on assignments.	36*	39	39	39
My teachers value students' creativity.	36*	39	39	40
The activities we do in my classes help me think about new ways to solve problems.	36*	39	39	39
My mathematics assignments require me to come up with different solutions for a problem.	38	40	39	39
My teachers encourage me to come up with original answers.	36*	39	39	40
At school, I am given a chance to express my ideas.	36*	38*	39	40

* Denotes a significant difference compared to the "Agree" category.
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

At the pan-Canadian level, students had higher scores on the index of pedagogies encouraging creative thinking compared to the OECD average (0.23 and 0.01, respectively). Three provinces had higher index scores than the Canada average: Ontario (0.28), Manitoba (0.31), and Saskatchewan (0.31). Three provinces had index scores at the Canadian average: New Brunswick (0.17), Alberta (0.29), and British Colombia (0.24). The remaining provinces had index scores lower than the Canada average (Figure 2.12, Appendix B.2.4b).

Figure 2.12

Average scores on the index of pedagogies encouraging creative thinking



Note: Darker shade denotes a significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When results are explored in relation to sociodemographic characteristics, trends in Canada overall and OECD are similar to each other. In Canada overall and on average across OECD countries, boys, immigrant students, and socioeconomically advantaged students (students in the top quarter of the ESCS index) had higher scores on the index of pedagogies encouraging creative thinking than did girls, non-immigrant students, and socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index) (Table 2.8, Appendix B.2.4b).

With respect to the provinces, there was no difference between boys and girls in scores on this index in any province except Ontario. Immigrant students outperformed non-immigrant students on this index in six provinces: New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. Prince Edward Island and Quebec are the only two provinces where socioeconomically advantaged students had higher scores on this index than did socioeconomically disadvantaged students (Appendix B.2.4b).

At the pan-Canadian level, students in English-language school systems had higher scores than their peers in French-language systems on this index (Table 2.8). Alberta is the only province where students in French-language schools had higher scores on this index than those of students in English-language schools (Appendix B.2.4b).

Table 2.8

Differences in scores on the index of pedagogies encouraging creative thinking, by sociodemographic characteristics

	Anglophone - francophone students	Girls - boys	Immigrant - non-immigrant students	Top - bottom quarter of ESCS
Newfoundland and Labrador	--	-0.01	0.10	0.05
Prince Edward Island	--	0.14	0.33	0.53*
Nova Scotia	0.01	-0.05	0.27	0.10
New Brunswick	-0.10	-0.11	0.29*	0.06
Quebec	0.00	-0.05	-0.03	0.18*
Ontario	0.00	-0.09*	0.12*	0.05
Manitoba	-0.03	-0.05	0.31*	-0.03
Saskatchewan	-0.06	0.10	0.22*	0.10
Alberta	-0.23*	-0.04	0.21*	0.16
British Columbia	--	-0.08	0.12*	0.14
Canada	**0.15***	**-0.06***	**0.14***	**0.11***
OECD average	**--**	**-0.06***	**0.04***	**0.02***

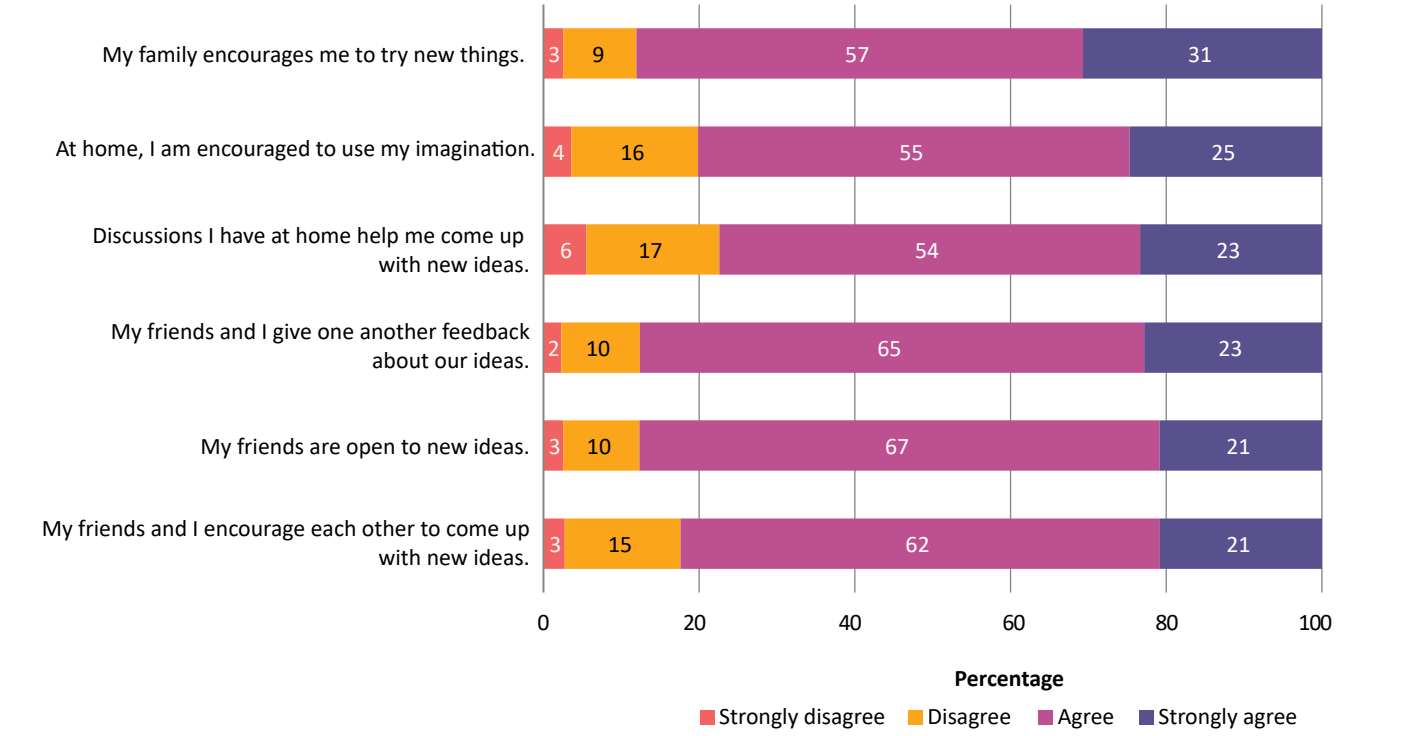
-- Not available.
* Denotes a significant difference within a province, Canada, or OECD.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Index of peer and family environments encouraging creative thinking

In the background questionnaire, students were asked about their level of agreement with six statements about the degree to which creative thinking was fostered and supported by their peer and family environment (see Figure 2.13). In Canada, 88 percent of students agreed or strongly agreed with the statements "My family encourages me to try new things"; "My friends and I give one another feedback about our ideas"; and "My friends are open to new ideas" (Figure 2.13). The corresponding OECD averages were 83 percent, 85 percent, and 85 percent, respectively (Appendix B.2.5a). At the provincial level, the proportion of students who agreed or strongly agreed with the statement "My family encourages me to try new things" ranged from 86 percent in Saskatchewan and Quebec to 89 percent in four other provinces (Nova Scotia, Ontario, Alberta, and British Columbia) (Appendix B.2.5ad).

Figure 2.13

Percentage of Canadian students by their agreement levels with statements about how creativity is supported by their peers and family



Note: Percentages may not add up at 100 due to rounding. Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Table 2.9 presents the relationship between students' self-reported feelings about how their creativity is supported by their peers and family and their creative thinking performance. In Canada as well as on average across OECD countries, students who agreed with each of the six statements had higher scores on the creative thinking cognitive test than students who strongly disagreed with these statements. The differences in scores for Canada overall range from 2 points to 7 points, depending on the particular statement. At the pan-Canadian level, students who agreed with the statement "Discussions I have at home help me come up with new ideas" scored on average 2 points higher than students who strongly disagreed with this statement, although, at the provincial level, this trend is found only in British Columbia. In Canada overall, students who agreed with the statement "My friends are open to new ideas" scored on average 7 points higher than students who strongly disagreed with this statement. This trend is evident in all provinces except Newfoundland and Labrador,

Prince Edward Island, and Nova Scotia, with a difference in scores as high as 10 points, in Alberta (Table 2.9, Appendix B.2.5a).

Table 2.9

Relationship between Canadian students' agreement with statements about how creativity is supported by their peers and family and creative thinking scores

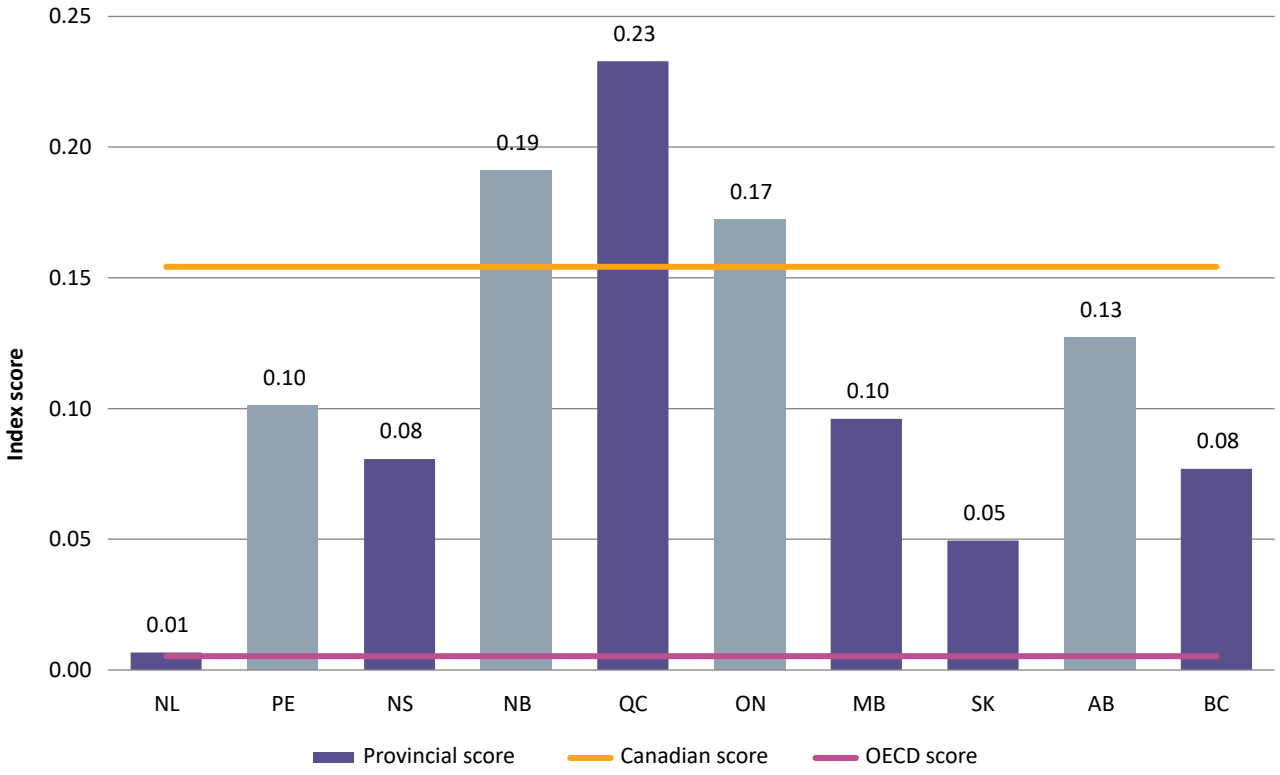
	Strongly disagree	Disagree	Agree	Strongly agree
My friends are open to new ideas.	32*	38*	39	40*
My friends and I give one another feedback about our ideas.	33*	37*	39	40*
My friends and I encourage each other to come up with new ideas.	34*	38	39	40*
My family encourages me to try new things.	34*	37*	39	40*
At home, I am encouraged to use my imagination.	36*	39	39	40*
Discussions I have at home help me come up with new ideas.	37*	39	39	40*

* Denotes a significant difference compared to the "Agree" category.
Note: Results for Canada should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Canada had a higher score than the OECD average on the index of peer and family environments encouraging creative thinking (0.15 and 0.01, respectively). There was variation in scores among the provinces: the index score ranged from 0.01 in in Newfoundland and Labrador to 0.23 in Quebec. Quebec was the only province that had an index score above the Canadian average. Four provinces had index scores at the Canadian average: Prince Edward Island (0.10), New Brunswick (0.19), Ontario (0.17), and Alberta (0.13). The remaining five provinces had lower index scores than the Canadian average) (Figure 2.14, Appendix B.2.5b).

Figure 2.14

Average scores on the index of peer and family environments encouraging creative thinking



Note: Darker shade denotes a significant difference compared to Canada. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

When results for the index of peer and family environments encouraging creative thinking are examined by sociodemographic characteristics, some trends can be observed. Students in French-language schools had higher scores on this index than students in English-language schools in four provinces (Nova Scotia, New Brunswick, Quebec, and Alberta) and Canada overall. Girls and socioeconomically advantaged students (students in the top quarter of the ECSC index) scored higher than boys and socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index) in all provinces, in Canada overall, and in OECD countries on average. While there was no difference in average scores between immigrant and non-immigrant students in Canada overall, immigrant students had higher scores in three provinces: Nova Scotia (0.33), Manitoba (0.13), and Saskatchewan (0.16) (Table 2.10, Appendix B.2.5b).

Table 2.10

Differences in scores on the index of peer and family environments encouraging creative thinking, by sociodemographic characteristics

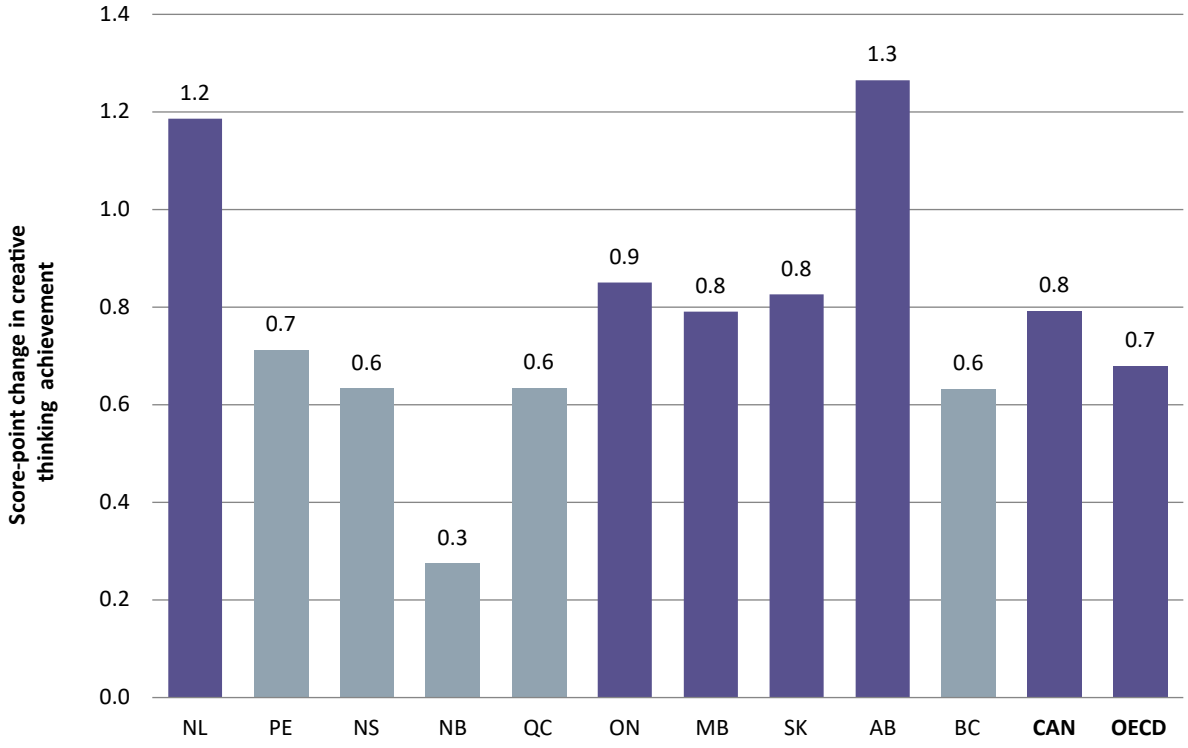
	Anglophone - francophone students	Girls - boys	Immigrant - non-immigrant students	Top - bottom quarter of ESCS
Newfoundland and Labrador	--	0.36*	-0.01	0.54*
Prince Edward Island	--	0.45*	-0.07	0.49*
Nova Scotia	-0.24*	0.20*	0.33*	0.45*
New Brunswick	-0.14*	0.21*	0.14	0.50*
Quebec	-0.13*	0.30*	-0.07	0.37*
Ontario	-0.04	0.18*	0.06	0.30*
Manitoba	-0.09	0.18*	0.13*	0.46*
Saskatchewan	-0.15	0.11*	0.16*	0.30*
Alberta	-0.20*	0.13*	0.04	0.31*
British Columbia	--	0.18*	0.05	0.26*
Canada	**-0.12***	**0.20***	**0.04**	**0.34***
OECD average	**--**	**0.19***	**-0.08***	**0.35***

-- Not available.
* Denotes a significant difference within a province, Canada, or OECD.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, only results for English-language schools are available for these provinces. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Figure 2.15 presents the relationship between this index and creative thinking assessment scores, after accounting for gender and student socioeconomic profile. A one-unit change in the index score is linked to a 0.8-point increase in students' creative thinking performance in Canada and a 0.7-point increase in OECD countries on average. Variation is evident across provinces, with Newfoundland and Labrador and Alberta presenting the strongest relationship (1.2 and 1.3 points, respectively) (Figure 2.15, Appendix B.2.5c).

Figure 2.15

Relationship between creative thinking performance and a one-unit change in the index of peer and family environments encouraging creative thinking (after accounting for gender and student socioeconomic profile)



Note: Darker shade denotes a significant difference within a province, Canada, or OECD. Results for Canada, most Canadian provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), and certain countries should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Summary

This chapter has examined the results of the student questionnaire component of the PISA 2022 creative thinking assessment, which collected information on a range of student attitudes, beliefs, and behaviours. The results were analyzed across five indices: creative self-efficacy, openness to intellect, student participation in creative activities at school, pedagogies encouraging creative thinking, and peer and family environments encouraging creative thinking. Each of these indices was analyzed in relation to students' performance in the creative thinking cognitive test as well as to sociodemographic characteristics such as gender, language of school system, immigrant identity, and socioeconomic status as measured by the ESCS index.

Overall, Canadian students had higher levels of creative self-efficacy compared to the OECD average. Students in French-language schools, girls, non-immigrant students, and socioeconomically advantaged students (students in the top quarter of the ESCS index) had higher levels of creative self-efficacy in comparison to their respective counterparts.

Results demonstrated a generally positive relationship between higher levels of creative self-efficacy and students' performance in the creative thinking cognitive test. For example, in Canada overall, students who reported feeling confident about "coming up with creative ideas for school projects" scored 6 points higher than their peers who reported feeling not at all confident about this task.

On average, Canadian students also had a higher level of openness to intellect compared to the OECD average, though there is variation in index scores among the provinces. Canadian students in French-language school

systems, girls, and socioeconomically advantaged students had higher levels of openness to intellect than their respective counterparts. Immigrant students had higher levels of openness to intellect than non-immigrant students in Canada overall, as well as on average across OECD countries.

There is a generally positive relationship between students' openness to intellect and their creative thinking performance. Students who agreed with the statements reflecting an openness to intellect scored higher than students who strongly disagreed with the statements, with scores ranging from 2 to 7 points higher, depending on the statement.

With respect to Canadian students' participation in creative activities at school, levels were highest for art classes/activities, with 28 percent of students in Canada overall participating in art activities from about once or twice a week to every day. Provincially, participation in art classes/activities at this rate ranged from 18 percent in Prince Edward Island to 41 percent in Nova Scotia. In Canada overall, girls, immigrant students, and socioeconomically advantaged students had higher scores in the index of participation in creative activities at school than boys, non-immigrant students, and socioeconomically disadvantaged students (students in the bottom quarter of the ESCS index).

Across Canada as well as on average across the participating OECD countries, students who reported never or almost never participating in creative activities at their school scored higher on the creative thinking cognitive test compared to students who reported participating in creative activities at their school from about once or twice per week to every day. However, after accounting for students' and schools' characteristics, as well as students' mathematics and reading performance, no strong association was found between participation in creative activities at school and creative thinking performance.

On average, at least two-thirds of Canadian students agreed or strongly agreed that creativity was supported and fostered in their school and class environments. The scores for the index of pedagogies encouraging creative thinking were higher in Canada overall compared to the OECD average. Students in English-language school systems, boys, immigrant students, and socioeconomically advantaged students had higher scores for this index than their counterparts on average across Canada.

Students in Canada who agreed with statements indicating that creativity was supported and fostered in their school and class environments generally had higher scores in the creative thinking assessment than those who strongly disagreed with such statements.

In Canada, three-quarters or more of students agreed or strongly agreed with statements affirming that they received support from their peers and family to engage in creative thinking, a proportion that was higher than the OECD average. Quebec was the only province to have a score on the index of peer and family environments encouraging creative thinking higher than the Canadian average, while four provinces had lower index scores than the Canadian average. At the pan-Canadian level, students in French-language schools, girls, and socioeconomically advantaged students had higher scores on this index than students in English-language school systems, boys, and socioeconomically disadvantaged students.

Canadian students who agreed with statements about peer and family environments encouraging creative thinking scored higher in the creative thinking cognitive test than their peers who disagreed with these statements.

Conclusion

"The best way to get people to think outside the box is not to create the box in the first place."

- Martin Cooper

The PISA inaugural assessment of students' skills, attitudes, and behaviours related to creative thinking has provided valuable insights at the international, country, and provincial levels. This report examined students' performance on the cognitive portion of the PISA 2022 assessment of creative thinking and has analyzed these results in relation to students' self-reported skills and attitudes, as well as the environments in which they live and learn, as reported in the student questionnaire. Chapter 1 examined students' creative thinking performance, with reference to proficiency levels, achievement scores, and a range of student characteristics. Chapter 2 analyzed these scores in relation to five indices (creative self-efficacy, openness to intellect, participation in creative activities in school, pedagogies encouraging creative thinking, and peer and family environments encouraging creative thinking) in addition to selected sociodemographic characteristics.

Beyond Canada

On an international scale, Canada performed well in the PISA 2022 creative thinking assessment. Canadian students achieved an average score of 38 points in creative thinking, and were outperformed only by students in Singapore. Overall, 89 percent of Canadian students performed at Level 3 (the baseline level of proficiency for creative thinking) or above, which is higher than the OECD average of 78 percent. Only two countries, Singapore and Latvia, had a higher proportion of students performing at Level 3 or above compared to Canada. With respect to the proportion of students performing at the highest proficiency levels (Levels 5 and 6), Canada ranked second among all countries, surpassed only by Singapore.

In each of the five indices derived from the student questionnaire that are analyzed in this report, Canadian students consistently had higher index scores than the OECD average. Compared to their international peers, students in Canada had higher scores on the indices of creative self-efficacy, openness to intellect, participation in creative activities at school, pedagogies encouraging creative thinking, and peer and family environments encouraging creative thinking.

In Canada overall, socioeconomically advantaged students had higher scores on all five indices compared to their socioeconomically disadvantaged counterparts. Students in French-language schools had higher scores than their anglophone peers on three indices (creative self-efficacy, openness to intellect, and peer and family environments encouraging creative thinking), while students in English-language schools had higher scores than their francophone counterparts on the index of pedagogies encouraging creative thinking. Girls had higher scores than boys on four indices (creative self-efficacy, openness to intellect, participation in creative activities at school, and peer and family environments encouraging creative thinking), while boys scored higher than girls on the index of pedagogies encouraging creative thinking. Finally, immigrant students had higher scores than non-immigrant students on three indices (openness to intellect, participation in creative activities at school, and pedagogies encouraging creative thinking), while non-immigrant students had higher scores than immigrant students on the index of creative self-efficacy. These trends tended to be consistent with those reflected in the respective OECD averages for these indices, with a few exceptions.

Within Canada

As a complement to the PISA 2022 international report on creative thinking, this report focused primarily on Canadian students' skills, attitudes, and behaviours related to creativity. Overall, findings from the creative thinking assessment demonstrate high levels of achievement among Canadian students. In the cognitive test, students in seven provinces achieved average scores above the OECD average, while students in the remaining three provinces achieved average scores that were at the OECD average. With regard to proficiency levels, at least 45 percent of students in Ontario, Alberta, and British Columbia were high performers (Levels 5 and 6). The proportion of high achievers ranged from 31 percent in Newfoundland and Labrador to 52 percent in Alberta, compared to the OECD average of 27 percent.

In Canada, creative thinking performance was positively related to the core PISA domains of mathematics, reading, and science, but the correlation was not as strong as that among the three core domains. While this finding suggests that a high creative thinking score could be associated with a strong performance in the core domains, it also indicates the success of this assessment in capturing a distinct set of skills unique to creativity.

Exploring the PISA 2022 creative thinking results by sociodemographic characteristics provides insight into several trends. On average, Canadian students in English-language schools, students who spoke English at home, girls, second-generation immigrants, and socioeconomically advantaged students achieved higher levels of proficiency in creative thinking than their respective counterparts. However, some variations in these trends were found in the provinces.

A positive relationship was observed between high scores on four of the five indices (creative self-efficacy, openness to intellect, pedagogies encouraging creative thinking, and peer and family environments encouraging creative thinking) and students' performance in creative thinking. Index scores were also analyzed in relation to four sociodemographic characteristics: language of the school system, gender, immigrant status, and socioeconomic status. In Canada overall, socioeconomically advantaged students consistently had higher scores for each of the five indices, while there was variation at the pan-Canadian level as well as between provinces with regard to immigrant status, language of school system, and gender. Overall, most Canadian students reported feeling confident in their ability to do creative thinking tasks. Moreover, the majority of students in Canada agreed that creativity was supported and fostered in their school, class, peer, and family environments.

The results of the PISA 2022 creative thinking assessment demonstrate the success of education systems across Canada, but they also offer important insights about areas for growth. Looking ahead to a future that is becoming increasingly difficult to predict, it is absolutely essential to think about the skills that young people will need to be successful. While the core domains of mathematics, reading, and science continue to be foundational to a quality education, there is growing recognition that global competencies such as creativity can "equip learners with the ability to meet the shifting and ongoing demands of life, work and learning; to be active and responsive in their communities; to understand diverse perspectives; and to act on issues of global significance" (CMEC, 2018, p. 3). As technology, automation, and artificial intelligence continue to rapidly advance and revolutionize our vision of the future, education systems must step up to the challenge of fostering the infinite capacity of our future generations to imagine, create, and think outside the box.

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Appendix A

Samples of the international source versions of the cognitive units and items from the PISA 2022 creative thinking assessment are available at the following link: https://www.oecd.org/en/about/programmes/pisa/pisa-test.html#creative.

The adapted English- and French-language Canadian versions are available at the following link: https://www.oecd.org/en/about/programmes/pisa/pisa-2022-creative-thinking-test-questions.html.

Appendix B

PISA 2022 Data Tables

Results for Canada and most provinces (except Prince Edward Island, New Brunswick, and Saskatchewan), as well as for certain other countries, should be treated with caution because one or more PISA technical standards were not met (see Appendix A of Elez et al. [2023] and the Reader's Guide section of OECD [2023b] for further details).

Table B.1.1a

Percentage of students at each proficiency level: CREATIVE THINKING

Country, province, or OECD average	Proficiency levels													
	Below Level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Singapore	U‡	(0.0)	1.2	(0.2)	4.5	(0.3)	12.6	(0.7)	24.0	(0.6)	30.0	(0.8)	27.8	(0.7)
Latvia	U‡	(0.0)	0.9	(0.2)	7.5	(0.6)	26.4	(1.0)	38.8	(1.1)	21.6	(1.2)	4.8	(0.8)
Ontario	**U‡**	**(0.0)**	**1.8**	**(0.3)**	**7.1**	**(0.7)**	**16.9**	**(1.0)**	**25.0**	**(1.2)**	**25.0**	**(1.0)**	**24.2**	**(1.3)**
Korea	U‡	(0.2)	2.2	(0.3)	7.3	(0.7)	16.8	(1.0)	27.4	(1.4)	27.6	(1.2)	18.3	(1.3)
Alberta	**U‡**	**(0.1)**	**2.4**	**(0.8)**	**7.7**	**(1.4)**	**15.4**	**(1.7)**	**22.7**	**(1.9)**	**23.4**	**(1.7)**	**28.4**	**(2.6)**
Denmark	U‡	(0.0)	1.8	(0.3)	8.4	(0.6)	24.1	(1.0)	34.3	(1.2)	23.5	(0.9)	7.8	(0.7)
Estonia	U‡	(0.0)	2.0	(0.3)	9.0	(0.8)	23.1	(0.8)	31.6	(0.9)	23.9	(1.0)	10.4	(0.7)
Canada	**U‡**	**(0.0)**	**2.6**	**(0.2)**	**8.5**	**(0.5)**	**18.5**	**(0.6)**	**25.5**	**(0.7)**	**23.4**	**(0.6)**	**21.4**	**(0.7)**
British Columbia	**U‡**	**(0.1)**	**2.9**	**(0.7)**	**8.6**	**(1.1)**	**17.7**	**(1.3)**	**25.5**	**(1.5)**	**23.5**	**(1.4)**	**21.7**	**(2.2)**
Australia	U‡	(0.0)	2.7	(0.3)	9.1	(0.6)	19.3	(0.5)	26.1	(0.7)	23.6	(0.8)	19.0	(0.8)
Manitoba	**U‡**	**(0.1)**	**2.9**	**(0.6)**	**10.0**	**(1.0)**	**23.1**	**(1.6)**	**28.5**	**(1.6)**	**21.7**	**(1.5)**	**13.7**	**(1.8)**
Quebec	**U‡**	**(0.1)**	**3.6**	**(0.6)**	**9.4**	**(1.0)**	**20.4**	**(1.4)**	**27.1**	**(1.2)**	**22.3**	**(1.4)**	**17.0**	**(1.7)**
New Zealand	U‡	(0.1)	2.7	(0.3)	10.6	(0.6)	21.0	(0.8)	26.1	(1.0)	23.3	(0.8)	16.3	(0.9)
Nova Scotia	**U‡**	**(0.1)**	**U**	**(0.9)**	**11.0**	**(1.6)**	**24.2**	**(2.1)**	**26.5**	**(1.9)**	**21.2**	**(2.4)**	**14.6**	**(2.2)**
Prince Edward Island	**0.0‡**	**(0.0)**	**U‡**	**(1.9)**	**11.4**	**(2.8)**	**22.6**	**(3.4)**	**28.7**	**(4.4)**	**21.4**	**(3.8)**	**U**	**(6.0)**
Belgium	U‡	(0.1)	3.3	(0.4)	11.4	(0.6)	22.8	(0.7)	29.6	(0.9)	22.6	(0.8)	10.1	(1.0)
Saskatchewan	**U‡**	**(0.1)**	**2.9**	**(0.7)**	**12.0**	**(1.1)**	**23.5**	**(1.8)**	**27.8**	**(1.5)**	**20.8**	**(1.8)**	**13.0**	**(1.5)**
Finland	0.3	(0.1)	4.9	(0.4)	11.5	(0.6)	19.8	(0.7)	24.6	(0.9)	21.4	(0.8)	17.6	(0.9)
Portugal	U‡	(0.1)	4.5	(0.6)	12.3	(0.6)	24.5	(0.8)	29.1	(1.0)	20.6	(0.8)	8.8	(0.6)
New Brunswick	**U‡**	**(0.1)**	**4.0**	**(0.9)**	**13.2**	**(2.0)**	**23.4**	**(2.0)**	**26.8**	**(2.1)**	**19.6**	**(1.8)**	**12.8**	**(2.7)**
Poland	U‡	(0.1)	4.3	(0.5)	13.0	(0.9)	22.6	(0.9)	27.1	(0.9)	22.2	(0.9)	10.7	(0.6)
Newfoundland and Labrador	**U‡**	**(0.1)**	**3.9**	**(1.2)**	**14.0**	**(2.0)**	**24.7**	**(3.1)**	**26.8**	**(2.3)**	**18.8**	**(2.2)**	**11.8**	**(3.3)**
Spain	U‡	(0.1)	5.1	(0.4)	14.8	(0.5)	26.6	(0.6)	28.0	(0.7)	17.5	(0.4)	7.8	(0.4)
Lithuania	U‡	(0.1)	5.1	(0.5)	15.3	(0.9)	25.8	(0.8)	27.4	(0.9)	18.3	(0.6)	8.0	(0.6)
Czech Republic	U‡	(0.1)	5.5	(0.6)	14.8	(0.7)	25.9	(0.8)	28.2	(0.9)	18.3	(0.7)	7.1	(0.6)
France	U‡	(0.1)	6.1	(0.5)	15.7	(0.8)	24.9	(0.9)	27.6	(0.9)	18.4	(0.9)	7.2	(0.6)
Chinese Taipei	U‡	(0.1)	7.0	(0.6)	14.9	(0.8)	23.8	(0.9)	26.7	(1.1)	18.3	(0.8)	8.9	(0.9)
Germany	U‡	(0.1)	6.6	(0.7)	15.6	(0.9)	24.5	(1.1)	26.4	(1.0)	17.8	(1.1)	8.8	(0.7)
Hong Kong (China)	U‡	(0.1)	6.6	(0.6)	15.9	(0.8)	27.9	(1.0)	27.7	(1.0)	15.7	(0.8)	6.0	(0.9)
Macao (China)	U‡	(0.1)	7.1	(0.6)	15.7	(0.7)	26.4	(1.0)	28.1	(1.0)	16.7	(0.7)	5.7	(0.5)
Italy	U‡	(0.1)	7.2	(0.6)	16.5	(0.8)	26.9	(0.8)	27.2	(0.9)	16.0	(0.8)	5.9	(0.5)
Netherlands	U‡	(0.1)	7.8	(0.9)	16.1	(1.0)	22.6	(1.2)	25.5	(1.1)	19.3	(1.0)	8.5	(0.7)
Israel	2.4	(0.4)	9.4	(0.7)	13.1	(0.8)	20.7	(0.7)	24.0	(0.8)	19.5	(0.9)	10.8	(0.8)

Table B.1.1a(cont'd)

Percentage of students at each proficiency level: CREATIVE THINKING

Country, province, or OECD average	Proficiency levels													
	Below Level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Croatia	U‡	(0.1)	7.3	(0.7)	18.6	(0.8)	28.6	(1.0)	26.8	(1.0)	14.5	(0.7)	4.0	(0.5)
Chile	U‡	(0.1)	7.5	(0.6)	18.7	(0.8)	28.6	(0.9)	25.1	(0.9)	14.0	(0.7)	6.0	(0.6)
Hungary	0.7‡	(0.2)	9.1	(0.7)	16.6	(0.9)	25.0	(0.8)	26.3	(0.8)	16.3	(0.8)	6.0	(0.6)
Slovenia	U‡	(0.1)	7.4	(0.6)	18.8	(0.7)	30.3	(0.9)	26.8	(1.1)	12.6	(0.8)	3.7	(0.4)
Malta	0.6‡	(0.2)	10.1	(0.7)	16.0	(1.0)	23.3	(1.0)	25.1	(0.9)	17.1	(1.0)	7.8	(0.6)
Iceland	0.6‡	(0.2)	9.0	(0.6)	18.7	(0.8)	26.8	(1.1)	23.5	(1.0)	14.6	(0.7)	6.8	(0.6)
Mexico	U‡	(0.1)	7.8	(0.7)	21.9	(1.1)	31.6	(1.1)	24.6	(1.0)	10.9	(0.7)	3.0	(0.4)
Slovak Republic	2.3	(0.4)	13.6	(1.0)	17.4	(0.8)	23.2	(1.0)	22.6	(0.8)	14.2	(0.8)	6.8	(0.6)
Uruguay	U‡	(0.1)	10.7	(0.8)	22.5	(1.0)	28.4	(0.9)	23.1	(0.8)	11.5	(0.7)	3.6	(0.5)
Serbia	0.6	(0.2)	12.4	(0.8)	21.7	(0.8)	26.2	(1.0)	21.6	(0.9)	12.0	(0.7)	5.4	(0.6)
Costa Rica	U‡	(0.1)	11.2	(0.8)	24.4	(1.1)	30.6	(1.0)	22.8	(1.0)	8.8	(0.6)	2.0	(0.3)
Greece	0.5‡	(0.2)	12.8	(1.0)	22.9	(0.8)	31.3	(1.1)	23.0	(0.9)	8.1	(0.6)	1.4	(0.2)
United Arab Emirates	5.0	(0.3)	17.6	(0.4)	16.5	(0.4)	18.6	(0.4)	18.0	(0.5)	13.3	(0.4)	11.0	(0.4)
Ukrainian regions (18 of 27)	1.0	(0.3)	16.8	(1.8)	21.8	(1.2)	26.2	(1.1)	20.5	(1.4)	10.2	(1.0)	3.4	(0.5)
Qatar	2.1	(0.3)	18.5	(0.7)	20.2	(0.9)	21.2	(0.8)	18.2	(1.0)	11.7	(0.6)	8.0	(0.5)
Romania	3.4	(0.4)	17.5	(1.1)	21.3	(0.9)	24.5	(1.0)	19.1	(0.9)	10.4	(0.8)	3.8	(0.5)
Colombia	1.8	(0.4)	19.0	(1.2)	24.5	(0.9)	25.0	(0.9)	17.8	(0.9)	8.6	(0.6)	3.4	(0.5)
Mongolia	1.7	(0.3)	16.3	(0.8)	27.6	(1.1)	29.1	(0.9)	17.6	(0.7)	6.3	(0.6)	1.4	(0.3)
Malaysia	3.7	(0.4)	19.8	(1.0)	22.1	(0.8)	24.5	(0.8)	18.2	(0.8)	8.7	(0.7)	3.0	(0.5)
Jamaica	3.7	(0.6)	22.5	(1.3)	21.5	(1.2)	20.7	(1.3)	15.6	(1.1)	9.1	(0.9)	6.9	(0.9)
Moldova	2.9	(0.3)	22.4	(0.9)	25.6	(0.8)	23.8	(0.8)	15.9	(0.8)	7.2	(0.6)	2.2	(0.3)
Brunei Darussalam	4.1	(0.3)	24.0	(0.9)	23.8	(0.8)	22.2	(0.6)	15.1	(0.6)	7.8	(0.5)	3.2	(0.3)
Cyprus	2.7	(0.3)	25.2	(0.6)	24.5	(0.7)	22.2	(0.6)	14.9	(0.5)	7.3	(0.4)	3.2	(0.3)
Kazakhstan	3.7	(0.3)	24.3	(0.7)	24.6	(0.8)	21.4	(0.5)	14.5	(0.5)	7.8	(0.4)	3.8	(0.3)
Panama	2.2	(0.4)	22.3	(1.3)	28.4	(1.1)	26.0	(1.3)	14.2	(1.1)	4.9	(0.6)	1.9	(0.4)
Peru	3.9	(0.4)	25.1	(1.0)	24.1	(1.0)	21.9	(0.8)	14.6	(0.7)	7.3	(0.6)	3.1	(0.3)
Saudi Arabia	1.9	(0.3)	25.8	(1.0)	26.3	(1.1)	23.0	(0.8)	14.0	(0.7)	6.4	(0.5)	2.6	(0.4)
Brazil	4.3	(0.3)	25.5	(0.8)	24.5	(0.6)	20.9	(0.6)	14.0	(0.6)	7.2	(0.5)	3.7	(0.4)
El Salvador	2.5	(0.4)	26.3	(1.1)	26.7	(0.8)	22.2	(0.8)	13.5	(0.7)	6.0	(0.5)	2.8	(0.5)
Baku (Azerbaijan)	1.6	(0.3)	26.1	(1.0)	28.7	(0.9)	23.1	(0.8)	12.8	(0.6)	5.5	(0.4)	2.2	(0.3)
Bulgaria	9.6	(0.9)	29.4	(1.1)	22.4	(0.9)	18.7	(1.0)	12.1	(0.7)	5.6	(0.5)	2.2	(0.4)
Thailand	4.5	(0.5)	31.0	(1.1)	27.6	(1.0)	19.6	(0.9)	10.7	(0.7)	4.6	(0.5)	2.0	(0.3)
Jordan	7.5	(0.6)	32.3	(1.0)	24.2	(0.8)	18.7	(0.7)	10.8	(0.6)	4.6	(0.5)	1.9	(0.4)
North Macedonia	14.7	(0.6)	32.0	(0.8)	19.3	(0.8)	15.6	(0.6)	10.7	(0.5)	5.1	(0.5)	2.5	(0.3)
Indonesia	8.3	(0.8)	34.8	(1.1)	25.7	(0.7)	17.7	(0.7)	8.7	(0.7)	3.4	(0.4)	1.4	(0.3)
Palestinian Authority	12.0	(0.7)	35.1	(0.9)	22.3	(0.8)	15.8	(0.6)	9.0	(0.5)	4.0	(0.3)	1.8	(0.3)
Morocco	24.5	(1.7)	35.4	(1.2)	16.8	(0.9)	11.5	(0.9)	6.7	(0.7)	3.2	(0.4)	1.9	(0.3)
Philippines	35.6	(1.5)	27.8	(0.9)	14.3	(0.7)	10.2	(0.7)	6.4	(0.5)	3.4	(0.4)	2.3	(0.5)
Dominican Republic	11.8	(0.8)	43.5	(1.1)	25.6	(1.0)	13.4	(0.7)	4.4	(0.4)	1.1	(0.2)	U‡	(0.1)
Uzbekistan	15.7	(0.9)	45.6	(1.0)	22.2	(0.7)	10.8	(0.6)	3.9	(0.4)	1.3	(0.2)	0.5	(0.1)
Albania	29.1	(1.0)	39.2	(1.1)	15.8	(0.7)	8.6	(0.6)	4.2	(0.4)	1.8	(0.3)	1.1	(0.2)
OECD average	**0.4**	**(0.0)**	**6.5**	**(0.1)**	**14.8**	**(0.1)**	**24.6**	**(0.2)**	**26.7**	**(0.2)**	**18.1**	**(0.2)**	**8.9**	**(0.1)**

SE Standard error
‡ There are fewer than 30 observations.
U Too unreliable to be published.
Note: Countries and provinces have been sorted in descending order by the total percentage of students who attained Level 3 or higher. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.1.1b

Percentage of students who performed below Level 3, at Level 3 or above, and at Levels 5 and 6: CREATIVE THINKING

Country, province, or OECD average	Proficiency levels					
	Below Level 3		Level 3 or above		Levels 5 and 6	
	%	Standard error	%	Standard error	%	Standard error
Singapore	5.7	(0.4)	94.3	(0.4)	57.8	(0.8)
Latvia	8.4	(0.7)	91.6	(0.7)	26.4	(1.4)
Ontario	**8.9**	**(0.8)**	**91.1**	**(0.8)**	**49.2**	**(1.6)**
Korea	9.8	(0.8)	90.2	(0.8)	45.9	(1.8)
Alberta	**10.2**	**(1.7)**	**89.8**	**(1.7)**	**51.7**	**(3.0)**
Denmark	10.2	(0.8)	89.8	(0.8)	31.3	(1.1)
Estonia	11.0	(0.8)	89.0	(0.8)	34.3	(1.2)
Canada	**11.2**	**(0.6)**	**88.8**	**(0.6)**	**44.8**	**(0.9)**
British Columbia	**11.6**	**(1.4)**	**88.4**	**(1.4)**	**45.2**	**(2.7)**
Australia	11.9	(0.7)	88.1	(0.7)	42.7	(1.0)
Manitoba	**13.1**	**(1.3)**	**86.9**	**(1.3)**	**35.4**	**(2.3)**
Quebec	**13.2**	**(1.3)**	**86.8**	**(1.3)**	**39.3**	**(2.2)**
New Zealand	13.3	(0.7)	86.7	(0.7)	39.6	(1.2)
Nova Scotia	**13.6**	**(2.0)**	**86.4**	**(2.0)**	**35.8**	**(3.5)**
Prince Edward Island	**14.3**	**(4.0)**	**85.7**	**(4.0)**	**34.4**	**(7.9)**
Belgium	14.8	(0.7)	85.2	(0.7)	32.8	(1.1)
Saskatchewan	**14.9**	**(1.4)**	**85.1**	**(1.4)**	**33.8**	**(2.4)**
Finland	16.6	(0.8)	83.4	(0.8)	39.0	(1.3)
Portugal	17.0	(1.0)	83.0	(1.0)	29.4	(1.0)
New Brunswick	**17.4**	**(2.6)**	**82.6**	**(2.6)**	**32.4**	**(3.7)**
Poland	17.5	(1.0)	82.5	(1.0)	32.9	(1.1)
Newfoundland and Labrador	**18.0**	**(2.7)**	**82.0**	**(2.7)**	**30.6**	**(4.7)**
Spain	20.0	(0.7)	80.0	(0.7)	25.4	(0.7)
Lithuania	20.5	(1.1)	79.5	(1.1)	26.4	(0.9)
Czech Republic	20.5	(1.0)	79.5	(1.0)	25.4	(1.0)
France	22.0	(1.1)	78.0	(1.1)	25.6	(1.1)
Chinese Taipei	22.3	(1.2)	77.7	(1.2)	27.2	(1.2)
Germany	22.4	(1.2)	77.6	(1.2)	26.6	(1.6)
Hong Kong (China)	22.7	(1.2)	77.3	(1.2)	21.7	(1.2)
Macao (China)	23.1	(0.8)	76.9	(0.8)	22.4	(0.8)
Italy	24.0	(1.1)	76.0	(1.1)	21.9	(1.0)
Netherlands	24.1	(1.8)	75.9	(1.8)	27.8	(1.3)
Israel	24.9	(1.2)	75.1	(1.2)	30.3	(1.3)
Croatia	26.1	(1.3)	73.9	(1.3)	18.5	(1.0)
Chile	26.4	(1.1)	73.6	(1.1)	19.9	(1.1)
Hungary	26.4	(1.1)	73.6	(1.1)	22.3	(1.1)
Slovenia	26.5	(1.0)	73.5	(1.0)	16.3	(0.9)
Malta	26.7	(1.0)	73.3	(1.0)	24.9	(1.0)
Iceland	28.3	(0.9)	71.7	(0.9)	21.4	(0.8)
Mexico	30.0	(1.3)	70.0	(1.3)	13.8	(0.9)
Slovak Republic	33.3	(1.4)	66.7	(1.4)	21.0	(1.0)
Uruguay	33.4	(1.2)	66.6	(1.2)	15.1	(1.0)
Serbia	34.7	(1.3)	65.3	(1.3)	17.5	(1.0)
Costa Rica	35.8	(1.4)	64.2	(1.4)	10.8	(0.7)
Greece	36.2	(1.4)	63.8	(1.4)	9.5	(0.8)
United Arab Emirates	39.1	(0.5)	60.9	(0.5)	24.3	(0.6)
Ukrainian regions (18 of 27)	39.7	(2.2)	60.3	(2.2)	13.7	(1.3)

Table B.1.1b (cont'd)

Percentage of students who performed below Level 3, at Level 3 or above, and at Levels 5 and 6: CREATIVE THINKING

Country, province, or OECD average	Proficiency levels					
	Below Level 3		Level 3 or above		Levels 5 and 6	
	%	Standard error	%	Standard error	%	Standard error
Qatar	40.8	(1.0)	59.2	(1.0)	19.7	(0.7)
Romania	42.1	(1.7)	57.9	(1.7)	14.3	(1.1)
Colombia	45.3	(1.8)	54.7	(1.8)	11.9	(0.9)
Mongolia	45.6	(1.4)	54.4	(1.4)	7.7	(0.7)
Malaysia	45.6	(1.3)	54.4	(1.3)	11.7	(1.0)
Jamaica	47.7	(1.8)	52.3	(1.8)	16.0	(1.5)
Moldova	50.9	(1.2)	49.1	(1.2)	9.4	(0.8)
Brunei Darussalam	51.9	(0.8)	48.1	(0.8)	10.9	(0.5)
Cyprus	52.5	(0.8)	47.5	(0.8)	10.4	(0.5)
Kazakhstan	52.6	(1.0)	47.4	(1.0)	11.5	(0.6)
Panama	53.0	(1.6)	47.0	(1.6)	6.8	(0.7)
Peru	53.2	(1.3)	46.8	(1.3)	10.3	(0.8)
Saudi Arabia	54.0	(1.4)	46.0	(1.4)	9.0	(0.6)
Brazil	54.3	(1.0)	45.7	(1.0)	10.8	(0.7)
El Salvador	55.5	(1.3)	44.5	(1.3)	8.7	(0.8)
Baku (Azerbaijan)	56.4	(1.3)	43.6	(1.3)	7.7	(0.6)
Bulgaria	61.4	(1.3)	38.6	(1.3)	7.8	(0.7)
Thailand	63.1	(1.5)	36.9	(1.5)	6.7	(0.7)
Jordan	64.0	(1.3)	36.0	(1.3)	6.5	(0.7)
North Macedonia	66.1	(0.9)	33.9	(0.9)	7.7	(0.6)
Indonesia	68.8	(1.4)	31.2	(1.4)	4.8	(0.6)
Palestinian Authority	69.5	(1.2)	30.5	(1.2)	5.7	(0.5)
Morocco	76.7	(1.7)	23.3	(1.7)	5.2	(0.7)
Philippines	77.7	(1.4)	22.3	(1.4)	5.7	(0.8)
Dominican Republic	80.9	(0.9)	19.1	(0.9)	1.3	(0.2)
Uzbekistan	83.5	(0.9)	16.5	(0.9)	1.7	(0.3)
Albania	84.2	(0.9)	15.8	(0.9)	2.9	(0.4)
OECD average	**21.7**	**(0.2)**	**78.3**	**(0.2)**	**27.0**	**(0.2)**

Note: Countries and provinces have been sorted in descending order by the total percentage of students who attained Level 3 or higher. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.1.2

Average scores and confidence intervals: CREATIVE THINKING

Country, province, or OECD average	Average	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit	Difference from Canadian average		Difference from OECD average	
Singapore	41.0**	(0.2)	40.6	41.3	3.0**	(0.3)	8.3***	(0.2)
Alberta	**39.6****	**(0.7)**	**38.1**	**41.0**	**1.6****	**(0.6)**	**6.9*****	**(0.7)**
Ontario	**39.1****	**(0.4)**	**38.4**	**39.8**	**1.2****	**(0.3)**	**6.4*****	**(0.4)**
Korea	38.1	(0.4)	37.3	38.8	0.2	(0.4)	5.4***	(0.4)
British Columbia	**38.0**	**(0.7)**	**36.6**	**39.3**	**0.0**	**(0.6)**	**5.3*****	**(0.7)**
Canada	**37.9**	**(0.2)**	**37.5**	**38.4**	**--**	**--**	**5.3*****	**(0.2)**
Australia	37.3	(0.2)	36.8	37.8	-0.6	(0.3)	4.6***	(0.3)
Quebec	**36.5****	**(0.5)**	**35.5**	**37.5**	**-1.4****	**(0.5)**	**3.8*****	**(0.5)**
New Zealand	36.4**	(0.3)	35.9	37.0	-1.5**	(0.4)	3.8***	(0.3)
Estonia	35.9**	(0.3)	35.3	36.4	-2.1**	(0.3)	3.2***	(0.3)
Finland	35.8**	(0.3)	35.2	36.4	-2.1**	(0.4)	3.1***	(0.3)
Manitoba	**35.7****	**(0.6)**	**34.6**	**36.9**	**-2.2****	**(0.6)**	**3.1*****	**(0.6)**
Nova Scotia	**35.7****	**(0.9)**	**34.0**	**37.4**	**-2.2****	**(0.9)**	**3.0*****	**(0.9)**
Denmark	35.5**	(0.2)	35.0	36.0	-2.4**	(0.3)	2.8***	(0.2)
Prince Edward Island	**35.5**	**(1.8)**	**32.0**	**39.0**	**-2.5**	**(1.8)**	**2.8**	**(1.8)**
Saskatchewan	**35.2****	**(0.6)**	**34.0**	**36.3**	**-2.8****	**(0.6)**	**2.5*****	**(0.6)**
Latvia	35.1**	(0.3)	34.5	35.6	-2.9**	(0.4)	2.4***	(0.3)
Belgium	34.9**	(0.3)	34.4	35.4	-3.0**	(0.4)	2.2***	(0.3)
New Brunswick	**34.6****	**(1.1)**	**32.4**	**36.7**	**-3.4****	**(1.1)**	**1.9**	**(1.1)**
Poland	34.4**	(0.3)	33.9	35.0	-3.5**	(0.4)	1.8***	(0.3)
Newfoundland and Labrador	**34.1****	**(1.3)**	**31.6**	**36.6**	**-3.8****	**(1.3)**	**1.4**	**(1.3)**
Portugal	33.9**	(0.3)	33.3	34.5	-4.0**	(0.4)	1.2***	(0.3)
Lithuania	32.9**	(0.3)	32.3	33.4	-5.1**	(0.4)	0.2	(0.3)
Spain	32.8**	(0.2)	32.3	33.2	-5.2**	(0.3)	0.1	(0.2)
Czech Republic	32.6**	(0.3)	32.1	33.2	-5.3**	(0.4)	0.0	(0.3)
Chinese Taipei	32.6**	(0.4)	31.9	33.4	-5.3**	(0.5)	0.0	(0.4)
Germany	32.5**	(0.4)	31.7	33.3	-5.4**	(0.5)	-0.1	(0.4)
France	32.4**	(0.3)	31.8	33.0	-5.5**	(0.4)	-0.2	(0.3)
Netherlands	32.4**	(0.5)	31.5	33.3	-5.5**	(0.5)	-0.3	(0.5)
Israel	32.3**	(0.4)	31.5	33.0	-5.7**	(0.5)	-0.4	(0.4)
Macao (China)	31.6**	(0.2)	31.2	32.0	-6.3**	(0.3)	-1.0***	(0.2)
Hong Kong (China)	31.6**	(0.4)	30.9	32.3	-6.4**	(0.4)	-1.1***	(0.4)
Italy	31.4**	(0.3)	30.8	32.0	-6.5**	(0.4)	-1.3***	(0.3)
Malta	31.3**	(0.2)	30.9	31.8	-6.6**	(0.3)	-1.4***	(0.2)
Hungary	30.9**	(0.3)	30.3	31.6	-7.0**	(0.4)	-1.7***	(0.3)
Chile	30.7**	(0.3)	30.0	31.3	-7.3**	(0.4)	-2.0***	(0.3)
Croatia	30.5**	(0.3)	29.8	31.1	-7.5**	(0.4)	-2.2***	(0.3)
Iceland	30.5**	(0.3)	30.0	30.9	-7.5**	(0.3)	-2.2***	(0.3)
Slovenia	30.0**	(0.2)	29.5	30.4	-7.9**	(0.3)	-2.7***	(0.2)
Slovak Republic	29.2**	(0.4)	28.4	30.0	-8.7**	(0.5)	-3.5***	(0.4)
Mexico	29.0**	(0.3)	28.4	29.6	-8.9**	(0.4)	-3.7***	(0.3)
Serbia	28.7**	(0.4)	28.0	29.4	-9.2**	(0.4)	-4.0***	(0.4)
Uruguay	28.6**	(0.3)	28.0	29.3	-9.3**	(0.4)	-4.0***	(0.4)
United Arab Emirates	28.4**	(0.2)	28.1	28.7	-9.5**	(0.3)	-4.2***	(0.2)
Qatar	27.7**	(0.2)	27.2	28.1	-10.3**	(0.3)	-5.0***	(0.3)
Costa Rica	27.5**	(0.3)	26.9	28.1	-10.5**	(0.4)	-5.2***	(0.3)
Greece	27.0**	(0.3)	26.3	27.7	-10.9**	(0.4)	-5.7***	(0.3)
Ukrainian regions (18 of 27)	26.9**	(0.6)	25.7	28.1	-11.0**	(0.7)	-5.8***	(0.6)

Table B.1.2 (cont'd)

Average scores and confidence intervals: CREATIVE THINKING

Country, province, or OECD average	Average	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit	Difference from Canadian average		Difference from OECD average	
Romania	26.2**	(0.5)	25.3	27.2	-11.7**	(0.5)	-6.4***	(0.5)
Colombia	25.6**	(0.5)	24.6	26.5	-12.4**	(0.5)	-7.1***	(0.5)
Jamaica	25.5**	(0.5)	24.5	26.6	-12.4**	(0.6)	-7.1***	(0.5)
Malaysia	25.1**	(0.4)	24.4	25.9	-12.8**	(0.4)	-7.6***	(0.4)
Mongolia	24.9**	(0.3)	24.3	25.5	-13.0**	(0.4)	-7.8***	(0.3)
Moldova	23.9**	(0.3)	23.3	24.6	-14.0**	(0.4)	-8.7***	(0.3)
Kazakhstan	23.8**	(0.3)	23.3	24.4	-14.1**	(0.4)	-8.8***	(0.3)
Brunei Darussalam	23.7**	(0.2)	23.4	24.1	-14.2**	(0.3)	-8.9***	(0.2)
Cyprus	23.7**	(0.2)	23.3	24.1	-14.2**	(0.3)	-8.9***	(0.2)
Peru	23.5**	(0.3)	22.8	24.1	-14.5**	(0.4)	-9.2***	(0.4)
Brazil	23.3**	(0.3)	22.7	23.9	-14.6**	(0.4)	-9.4***	(0.3)
Saudi Arabia	23.3**	(0.3)	22.7	23.9	-14.6**	(0.4)	-9.4***	(0.3)
Panama	23.2**	(0.3)	22.5	23.9	-14.7**	(0.4)	-9.4***	(0.3)
El Salvador	23.0**	(0.4)	22.3	23.7	-15.0**	(0.4)	-9.7***	(0.4)
Baku (Azerbaijan)	22.8**	(0.3)	22.2	23.4	-15.1**	(0.4)	-9.9***	(0.3)
Thailand	20.9**	(0.4)	20.2	21.7	-17.0**	(0.4)	-11.7***	(0.4)
Bulgaria	20.7**	(0.4)	20.0	21.5	-17.2**	(0.4)	-12.0***	(0.4)
Jordan	20.2**	(0.4)	19.5	20.9	-17.7**	(0.4)	-12.5***	(0.4)
North Macedonia	19.1**	(0.2)	18.7	19.6	-18.8**	(0.3)	-13.6***	(0.2)
Indonesia	19.0**	(0.4)	18.2	19.7	-19.0**	(0.5)	-13.7***	(0.4)
Palestinian Authority	18.5**	(0.3)	17.8	19.1	-19.5**	(0.4)	-14.2***	(0.3)
Dominican Republic	15.5**	(0.3)	15.0	16.0	-22.4**	(0.3)	-17.2***	(0.3)
Morocco	15.5**	(0.6)	14.3	16.6	-22.4**	(0.6)	-17.2***	(0.6)
Uzbekistan	14.5**	(0.3)	14.0	15.0	-23.4**	(0.3)	-18.2***	(0.3)
Philippines	14.2**	(0.5)	13.2	15.2	-23.7**	(0.6)	-18.5***	(0.5)
Albania	13.1**	(0.3)	12.5	13.6	-24.8**	(0.4)	-19.6***	(0.3)
OECD average	**32.7****	**(0.1)**	**32.6**	**32.8**	**-5.3****	**(0.2)**	**--**	**--**

Note: Countries and provinces have been sorted in descending order by average score. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.
** Significant difference compared to Canada.
*** Significant difference compared to OECD average.

Table B.1.3

Variation in student performance between percentiles: CREATIVE THINKING

Country, province, or OECD average	Percentiles												Difference in score points between the 10th and 90th percentiles
	5th		10th		25th		75th		90th		95th		
	Score	SE	Score	SE	Score	SE	Score	SE	Score	SE	Score	SE	
Latvia	20.7	(0.5)	23.9	(0.4)	29.4	(0.4)	41.3	(0.3)	45.7	(0.4)	47.9	(0.4)	21.8
Uzbekistan	3.7	(0.1)	4.9	(0.2)	7.6	(0.2)	19.1	(0.4)	27.2	(0.6)	32.9	(0.9)	22.4
Dominican Republic	4.2	(0.2)	5.6	(0.2)	8.6	(0.2)	20.6	(0.4)	28.1	(0.5)	32.9	(0.6)	22.5
Denmark	19.3	(0.6)	22.8	(0.5)	29.1	(0.4)	42.6	(0.3)	47.1	(0.3)	49.2	(0.3)	24.3
Albania	2.3	(0.1)	3.2	(0.1)	5.3	(0.2)	17.8	(0.5)	28.0	(0.9)	35.6	(1.1)	24.9
Singapore	22.1	(0.5)	26.8	(0.5)	35.1	(0.3)	48.5	(0.2)	51.8	(0.2)	53.2	(0.2)	24.9
Estonia	18.7	(0.5)	22.4	(0.5)	28.9	(0.4)	43.5	(0.3)	48.1	(0.3)	50.2	(0.2)	25.7
Mexico	13.1	(0.5)	15.9	(0.4)	21.5	(0.4)	36.4	(0.4)	42.9	(0.5)	46.1	(0.5)	27.0
Costa Rica	11.7	(0.4)	14.3	(0.4)	19.7	(0.4)	34.9	(0.4)	41.4	(0.4)	44.8	(0.5)	27.1
Korea	18.5	(0.6)	23.1	(0.6)	31.3	(0.6)	46.3	(0.4)	50.3	(0.3)	52.1	(0.4)	27.2
Greece	10.7	(0.4)	13.4	(0.5)	19.4	(0.5)	34.4	(0.4)	40.7	(0.4)	43.9	(0.5)	27.3
Mongolia	8.9	(0.4)	11.8	(0.4)	17.2	(0.3)	32.1	(0.5)	39.4	(0.5)	43.2	(0.6)	27.6
Slovenia	13.0	(0.5)	16.2	(0.4)	22.4	(0.4)	37.7	(0.4)	43.9	(0.5)	46.8	(0.5)	27.6
Belgium	16.5	(0.5)	20.3	(0.4)	27.4	(0.4)	43.2	(0.3)	48.0	(0.4)	50.2	(0.3)	27.7
Prince Edward Island	**17.1**	**(2.0)**	**20.9**	**(2.0)**	**27.9**	**(1.9)**	**43.9**	**(2.4)**	**49.0**	**(2.1)**	**50.9**	**(2.2)**	**28.1**
Croatia	13.3	(0.4)	16.4	(0.5)	22.6	(0.5)	38.6	(0.4)	44.6	(0.4)	47.3	(0.3)	28.2
Panama	7.7	(0.3)	9.9	(0.4)	15.0	(0.4)	30.3	(0.5)	38.2	(0.6)	42.9	(0.7)	28.3
Portugal	15.3	(0.6)	19.2	(0.6)	26.2	(0.4)	42.3	(0.3)	47.5	(0.3)	49.8	(0.3)	28.3
Ontario	**19.5**	**(0.5)**	**23.7**	**(0.6)**	**31.6**	**(0.6)**	**47.7**	**(0.4)**	**52.0**	**(0.3)**	**53.8**	**(0.3)**	**28.3**
Manitoba	**17.2**	**(0.8)**	**21.0**	**(0.8)**	**28.2**	**(0.8)**	**44.3**	**(0.7)**	**49.4**	**(0.7)**	**51.5**	**(0.5)**	**28.4**
Indonesia	4.7	(0.3)	6.5	(0.3)	10.5	(0.3)	25.6	(0.6)	34.9	(0.8)	40.6	(0.9)	28.4
Nova Scotia	**17.5**	**(1.1)**	**21.1**	**(1.0)**	**27.7**	**(1.0)**	**44.4**	**(1.0)**	**49.6**	**(0.8)**	**51.8**	**(0.8)**	**28.5**
Spain	14.8	(0.4)	18.3	(0.3)	24.9	(0.3)	41.1	(0.2)	46.9	(0.2)	49.5	(0.2)	28.6
Saskatchewan	**17.1**	**(0.7)**	**20.4**	**(0.6)**	**27.3**	**(0.7)**	**43.8**	**(0.7)**	**49.0**	**(0.6)**	**51.2**	**(0.5)**	**28.7**
Hong Kong (China)	13.4	(0.5)	17.1	(0.5)	23.8	(0.4)	39.8	(0.5)	45.8	(0.5)	48.6	(0.5)	28.8
Czech Republic	14.4	(0.5)	17.8	(0.4)	24.7	(0.4)	41.1	(0.3)	46.6	(0.3)	49.1	(0.3)	28.8
Baku (Azerbaijan)	8.0	(0.3)	9.9	(0.3)	14.2	(0.3)	29.8	(0.4)	38.7	(0.5)	43.8	(0.5)	28.8
New Zealand	17.5	(0.5)	21.2	(0.4)	28.3	(0.4)	45.3	(0.4)	50.0	(0.3)	51.8	(0.3)	28.8
Australia	17.7	(0.4)	21.7	(0.4)	29.4	(0.4)	46.2	(0.3)	50.7	(0.2)	52.6	(0.2)	29.0
Uruguay	12.1	(0.4)	14.6	(0.4)	20.2	(0.4)	36.7	(0.5)	43.6	(0.6)	46.7	(0.5)	29.0
Lithuania	14.8	(0.5)	18.0	(0.4)	24.7	(0.4)	41.4	(0.3)	47.1	(0.3)	49.6	(0.3)	29.1
Macao (China)	13.0	(0.5)	16.6	(0.4)	23.7	(0.3)	40.0	(0.3)	45.7	(0.3)	48.4	(0.3)	29.1
Italy	13.2	(0.4)	16.6	(0.4)	23.4	(0.5)	39.8	(0.4)	45.7	(0.3)	48.5	(0.3)	29.2
Poland	15.4	(0.5)	19.0	(0.5)	26.3	(0.4)	43.4	(0.3)	48.2	(0.3)	50.4	(0.2)	29.2
Chile	13.1	(0.4)	16.3	(0.4)	22.5	(0.4)	39.0	(0.4)	45.6	(0.4)	48.6	(0.4)	29.3
France	13.9	(0.4)	17.3	(0.5)	24.2	(0.5)	41.2	(0.4)	46.7	(0.4)	49.2	(0.3)	29.4
Thailand	6.2	(0.3)	8.0	(0.3)	12.3	(0.3)	27.8	(0.6)	37.4	(0.8)	43.1	(0.8)	29.4
Canada	**17.9**	**(0.4)**	**22.1**	**(0.4)**	**30.1**	**(0.4)**	**46.9**	**(0.2)**	**51.6**	**(0.2)**	**53.5**	**(0.2)**	**29.5**
Newfoundland and Labrador	**16.0**	**(1.2)**	**19.1**	**(1.1)**	**25.8**	**(1.3)**	**43.0**	**(1.7)**	**48.6**	**(1.4)**	**50.9**	**(1.1)**	**29.5**
Quebec	**16.5**	**(0.7)**	**20.8**	**(0.7)**	**28.6**	**(0.7)**	**45.4**	**(0.6)**	**50.5**	**(0.5)**	**52.6**	**(0.4)**	**29.7**
New Brunswick	**15.9**	**(1.0)**	**19.3**	**(1.2)**	**26.1**	**(1.3)**	**43.5**	**(1.3)**	**49.1**	**(0.9)**	**51.4**	**(0.7)**	**29.8**
British Columbia	**17.7**	**(1.1)**	**21.9**	**(0.9)**	**30.1**	**(0.9)**	**47.0**	**(0.7)**	**51.7**	**(0.6)**	**53.5**	**(0.5)**	**29.8**
Alberta	**18.3**	**(1.2)**	**22.8**	**(1.3)**	**31.7**	**(1.1)**	**48.9**	**(0.7)**	**53.1**	**(0.6)**	**54.7**	**(0.5)**	**30.2**
Germany	13.5	(0.6)	17.0	(0.5)	24.0	(0.5)	41.5	(0.6)	47.4	(0.4)	49.9	(0.3)	30.3
Saudi Arabia	7.7	(0.2)	9.7	(0.2)	14.2	(0.3)	31.0	(0.5)	40.1	(0.6)	44.9	(0.6)	30.5
Morocco	2.5	(0.2)	3.5	(0.2)	6.0	(0.3)	21.9	(1.0)	33.9	(1.2)	41.2	(1.3)	30.5
Palestinian Authority	4.0	(0.2)	5.4	(0.2)	9.1	(0.3)	25.6	(0.6)	36.0	(0.7)	42.0	(0.6)	30.6

Table B.1.3 (cont'd)

Variation in student performance between percentiles: CREATIVE THINKING

Country, province, or OECD average	Percentiles												Difference in score points between the 10th and 90th percentiles
	5th		10th		25th		75th		90th		95th		
	Score	SE	Score	SE	Score	SE	Score	SE	Score	SE	Score	SE	
El Salvador	7.3	(0.3)	9.3	(0.3)	13.9	(0.4)	30.6	(0.5)	39.8	(0.7)	44.8	(0.8)	30.6
Jordan	5.1	(0.2)	6.7	(0.2)	10.8	(0.3)	27.8	(0.6)	37.4	(0.8)	42.9	(0.8)	30.7
Chinese Taipei	13.2	(0.5)	16.7	(0.5)	24.2	(0.5)	41.7	(0.4)	47.4	(0.4)	49.9	(0.4)	30.7
Hungary	11.6	(0.4)	15.1	(0.4)	22.4	(0.5)	40.0	(0.4)	45.9	(0.4)	48.6	(0.4)	30.8
Moldova	7.3	(0.2)	9.7	(0.3)	14.9	(0.3)	32.1	(0.5)	40.5	(0.6)	44.7	(0.6)	30.9
Iceland	12.0	(0.4)	15.2	(0.4)	21.8	(0.3)	39.4	(0.4)	46.2	(0.4)	49.0	(0.3)	31.0
Netherlands	12.9	(0.6)	16.2	(0.7)	23.3	(0.8)	41.9	(0.4)	47.3	(0.3)	49.7	(0.3)	31.1
Ukrainian regions (18 of 27)	9.1	(0.6)	11.6	(0.7)	17.8	(0.8)	35.5	(0.7)	43.0	(0.7)	46.4	(0.7)	31.3
Serbia	10.7	(0.3)	13.5	(0.4)	19.5	(0.5)	37.5	(0.5)	44.9	(0.5)	48.3	(0.5)	31.4
Colombia	8.3	(0.4)	10.8	(0.4)	16.4	(0.5)	33.9	(0.6)	42.3	(0.6)	46.2	(0.6)	31.5
Finland	14.8	(0.4)	18.9	(0.5)	27.1	(0.4)	45.6	(0.3)	50.5	(0.2)	52.5	(0.2)	31.6
Cyprus	7.2	(0.2)	9.2	(0.2)	14.1	(0.2)	32.1	(0.4)	41.3	(0.5)	45.8	(0.5)	32.1
Malta	11.1	(0.4)	14.6	(0.4)	22.2	(0.5)	40.9	(0.4)	46.9	(0.4)	49.5	(0.3)	32.4
Peru	6.6	(0.3)	8.7	(0.3)	13.7	(0.4)	31.9	(0.6)	41.2	(0.6)	45.8	(0.5)	32.5
Philippines	1.1	(0.1)	1.7	(0.1)	3.8	(0.2)	21.2	(1.0)	34.4	(1.4)	42.2	(1.3)	32.7
Malaysia	6.7	(0.3)	9.3	(0.4)	15.5	(0.4)	34.0	(0.6)	42.1	(0.7)	45.9	(0.7)	32.7
Bulgaria	4.4	(0.3)	6.1	(0.3)	10.6	(0.4)	29.2	(0.6)	38.9	(0.7)	43.8	(0.7)	32.8
Brunei Darussalam	6.4	(0.2)	8.7	(0.2)	13.9	(0.3)	32.4	(0.3)	41.6	(0.4)	45.9	(0.4)	32.9
Kazakhstan	6.7	(0.2)	8.9	(0.2)	14.0	(0.3)	32.5	(0.5)	42.1	(0.5)	46.6	(0.4)	33.2
Brazil	6.3	(0.2)	8.4	(0.2)	13.5	(0.3)	31.9	(0.5)	41.7	(0.6)	46.4	(0.6)	33.3
Romania	7.1	(0.4)	10.0	(0.5)	16.6	(0.6)	35.6	(0.7)	43.4	(0.6)	46.9	(0.5)	33.4
North Macedonia	3.6	(0.2)	4.8	(0.2)	8.4	(0.2)	27.7	(0.5)	38.7	(0.6)	44.1	(0.6)	33.9
Slovak Republic	8.3	(0.5)	11.8	(0.6)	19.5	(0.6)	39.2	(0.4)	46.1	(0.4)	49.1	(0.4)	34.3
Israel	8.9	(0.6)	13.5	(0.6)	23.0	(0.6)	42.8	(0.4)	48.2	(0.3)	50.6	(0.3)	34.8
Qatar	7.9	(0.3)	10.5	(0.3)	16.7	(0.3)	38.0	(0.5)	46.7	(0.4)	50.1	(0.3)	36.2
Jamaica	6.7	(0.4)	8.9	(0.5)	14.5	(0.6)	35.5	(0.9)	45.4	(1.0)	49.7	(0.9)	36.5
United Arab Emirates	6.0	(0.2)	8.7	(0.2)	16.1	(0.2)	40.6	(0.3)	48.5	(0.3)	51.5	(0.3)	39.8
OECD average	**14.3**	**(0.1)**	**17.8**	**(0.1)**	**24.7**	**(0.1)**	**41.1**	**(0.1)**	**46.7**	**(0.1)**	**49.3**	**(0.1)**	**28.9**

SE Standard error

Note: Countries and provinces have been sorted in ascending order by the difference in score points between the 10th and 90th percentiles. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.1.4

Correlation of performance in creative thinking with performance in mathematics, reading, and science

Country, province, or OECD average	Correlation between performance in creative thinking and performance in…						For comparison, correlation between performance in mathematics and reading		For comparison, correlation between performance in mathematics and science		For comparison, correlation between performance in reading and science	
	mathematics		reading		science							
	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE
Brunei Darussalam	0.80	(0.01)	0.81	(0.01)	0.80	(0.01)	0.88	(0.00)	0.92	(0.00)	0.88	(0.01)
Philippines	0.80	(0.01)	0.83	(0.01)	0.77	(0.01)	0.89	(0.01)	0.88	(0.01)	0.86	(0.01)
Romania	0.78	(0.01)	0.77	(0.01)	0.77	(0.01)	0.86	(0.01)	0.90	(0.01)	0.86	(0.01)
Israel	0.76	(0.01)	0.74	(0.01)	0.73	(0.01)	0.81	(0.01)	0.89	(0.01)	0.81	(0.01)
Bulgaria	0.76	(0.01)	0.74	(0.01)	0.74	(0.01)	0.83	(0.01)	0.87	(0.01)	0.81	(0.01)
Germany	0.76	(0.01)	0.76	(0.01)	0.76	(0.02)	0.84	(0.01)	0.90	(0.00)	0.87	(0.01)
Hungary	0.76	(0.01)	0.74	(0.01)	0.74	(0.01)	0.84	(0.01)	0.91	(0.00)	0.84	(0.01)
North Macedonia	0.75	(0.01)	0.72	(0.01)	0.74	(0.01)	0.80	(0.01)	0.85	(0.01)	0.77	(0.01)
Malaysia	0.75	(0.01)	0.79	(0.01)	0.78	(0.01)	0.79	(0.01)	0.87	(0.01)	0.83	(0.01)
Slovak Republic	0.74	(0.01)	0.72	(0.01)	0.73	(0.02)	0.83	(0.01)	0.89	(0.01)	0.82	(0.01)
Malta	0.73	(0.01)	0.73	(0.02)	0.72	(0.01)	0.78	(0.01)	0.87	(0.00)	0.81	(0.01)
Ukrainian regions (18 of 27)	0.72	(0.02)	0.67	(0.02)	0.72	(0.02)	0.80	(0.01)	0.86	(0.01)	0.80	(0.01)
Morocco	0.72	(0.01)	0.70	(0.01)	0.68	(0.01)	0.77	(0.01)	0.83	(0.01)	0.76	(0.01)
Netherlands	0.72	(0.02)	0.74	(0.02)	0.71	(0.02)	0.86	(0.01)	0.90	(0.00)	0.85	(0.01)
Qatar	0.72	(0.01)	0.70	(0.01)	0.70	(0.01)	0.81	(0.01)	0.86	(0.01)	0.79	(0.01)
Cyprus	0.72	(0.01)	0.70	(0.01)	0.68	(0.01)	0.75	(0.01)	0.83	(0.01)	0.76	(0.01)
Uruguay	0.72	(0.01)	0.69	(0.02)	0.71	(0.01)	0.80	(0.01)	0.87	(0.01)	0.80	(0.01)
Peru	0.71	(0.01)	0.70	(0.01)	0.68	(0.02)	0.81	(0.01)	0.86	(0.01)	0.79	(0.01)
Costa Rica	0.71	(0.01)	0.69	(0.02)	0.66	(0.02)	0.79	(0.01)	0.83	(0.01)	0.79	(0.01)
United Arab Emirates	0.71	(0.01)	0.71	(0.01)	0.69	(0.01)	0.81	(0.00)	0.85	(0.00)	0.79	(0.01)
Mongolia	0.71	(0.01)	0.69	(0.02)	0.70	(0.01)	0.79	(0.01)	0.87	(0.01)	0.79	(0.01)
France	0.71	(0.01)	0.72	(0.01)	0.70	(0.01)	0.84	(0.01)	0.89	(0.00)	0.83	(0.01)
Lithuania	0.71	(0.01)	0.69	(0.01)	0.69	(0.02)	0.81	(0.01)	0.88	(0.00)	0.82	(0.01)
Palestinian Authority	0.71	(0.01)	0.67	(0.01)	0.67	(0.01)	0.76	(0.01)	0.82	(0.01)	0.73	(0.01)
Portugal	0.70	(0.02)	0.70	(0.02)	0.69	(0.01)	0.81	(0.01)	0.87	(0.01)	0.81	(0.01)
Serbia	0.70	(0.01)	0.68	(0.01)	0.70	(0.02)	0.81	(0.01)	0.88	(0.01)	0.80	(0.01)
Moldova	0.70	(0.01)	0.74	(0.01)	0.71	(0.01)	0.83	(0.01)	0.88	(0.01)	0.82	(0.01)
Poland	0.70	(0.01)	0.68	(0.01)	0.68	(0.01)	0.81	(0.01)	0.87	(0.01)	0.81	(0.01)
Belgium	0.69	(0.01)	0.69	(0.01)	0.69	(0.01)	0.82	(0.01)	0.90	(0.00)	0.83	(0.01)
Greece	0.69	(0.01)	0.65	(0.02)	0.68	(0.02)	0.78	(0.01)	0.84	(0.01)	0.79	(0.01)
New Zealand	0.69	(0.02)	0.71	(0.01)	0.71	(0.02)	0.81	(0.01)	0.89	(0.00)	0.85	(0.01)
Brazil	0.69	(0.01)	0.70	(0.01)	0.68	(0.01)	0.80	(0.01)	0.85	(0.01)	0.79	(0.01)
Colombia	0.69	(0.01)	0.68	(0.01)	0.68	(0.02)	0.80	(0.01)	0.86	(0.01)	0.77	(0.01)
Thailand	0.68	(0.02)	0.67	(0.02)	0.68	(0.02)	0.79	(0.01)	0.84	(0.01)	0.77	(0.01)
Chinese Taipei	0.68	(0.02)	0.67	(0.02)	0.67	(0.01)	0.83	(0.01)	0.90	(0.01)	0.83	(0.01)
Finland	0.68	(0.01)	0.71	(0.01)	0.70	(0.01)	0.79	(0.01)	0.87	(0.01)	0.80	(0.01)
Czech Republic	0.68	(0.01)	0.67	(0.01)	0.68	(0.01)	0.81	(0.01)	0.88	(0.00)	0.80	(0.01)
Croatia	0.67	(0.02)	0.67	(0.02)	0.68	(0.02)	0.79	(0.01)	0.87	(0.01)	0.78	(0.01)
Jamaica	0.67	(0.02)	0.71	(0.02)	0.69	(0.02)	0.84	(0.01)	0.86	(0.01)	0.83	(0.01)
Singapore	0.67	(0.01)	0.66	(0.01)	0.66	(0.01)	0.82	(0.01)	0.89	(0.00)	0.83	(0.01)
El Salvador	0.67	(0.02)	0.66	(0.02)	0.66	(0.02)	0.80	(0.01)	0.81	(0.01)	0.76	(0.02)
Iceland	0.67	(0.01)	0.68	(0.01)	0.68	(0.02)	0.78	(0.01)	0.86	(0.01)	0.77	(0.01)
Uzbekistan	0.67	(0.02)	0.63	(0.02)	0.63	(0.02)	0.72	(0.01)	0.79	(0.01)	0.71	(0.01)

Table B.1.4 (cont'd)

Correlation of performance in creative thinking with performance in mathematics, reading, and science

Country, province, or OECD average	Correlation between performance in creative thinking and performance in…						For comparison, correlation between performance in mathematics and reading		For comparison, correlation between performance in mathematics and science		For comparison, correlation between performance in reading and science	
	mathematics		reading		science							
	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE	Cor.	SE
Mexico	0.66	(0.02)	0.67	(0.01)	0.66	(0.02)	0.82	(0.01)	0.86	(0.01)	0.80	(0.01)
Jordan	0.66	(0.01)	0.68	(0.01)	0.66	(0.01)	0.72	(0.01)	0.80	(0.01)	0.75	(0.01)
Macao (China)	0.66	(0.01)	0.64	(0.02)	0.66	(0.01)	0.76	(0.01)	0.88	(0.01)	0.79	(0.01)
Saudi Arabia	0.66	(0.01)	0.67	(0.01)	0.65	(0.01)	0.75	(0.01)	0.78	(0.01)	0.73	(0.01)
Albania	0.66	(0.01)	0.58	(0.01)	0.60	(0.01)	0.69	(0.01)	0.76	(0.01)	0.71	(0.01)
Australia	0.65	(0.01)	0.63	(0.01)	0.64	(0.01)	0.80	(0.01)	0.86	(0.00)	0.79	(0.01)
Baku (Azerbaijan)	0.64	(0.01)	0.63	(0.01)	0.63	(0.01)	0.75	(0.01)	0.83	(0.01)	0.74	(0.01)
Panama	0.64	(0.02)	0.66	(0.02)	0.65	(0.02)	0.82	(0.01)	0.87	(0.01)	0.79	(0.01)
Dominican Republic	0.64	(0.02)	0.67	(0.01)	0.62	(0.02)	0.81	(0.01)	0.81	(0.01)	0.78	(0.01)
Italy	0.64	(0.01)	0.62	(0.01)	0.61	(0.01)	0.77	(0.01)	0.85	(0.01)	0.76	(0.01)
Hong Kong (China)	0.63	(0.01)	0.61	(0.02)	0.60	(0.02)	0.79	(0.01)	0.85	(0.01)	0.76	(0.01)
Denmark	0.62	(0.02)	0.61	(0.02)	0.61	(0.02)	0.79	(0.01)	0.87	(0.01)	0.78	(0.01)
Estonia	0.62	(0.02)	0.58	(0.02)	0.62	(0.02)	0.77	(0.01)	0.86	(0.01)	0.75	(0.01)
Nova Scotia	**0.62**	**(0.03)**	**0.60**	**(0.03)**	**0.60**	**(0.03)**	**0.79**	**(0.01)**	**0.85**	**(0.01)**	**0.76**	**(0.02)**
Chile	0.61	(0.01)	0.58	(0.02)	0.57	(0.02)	0.79	(0.01)	0.86	(0.01)	0.78	(0.01)
Newfoundland and Labrador	**0.61**	**(0.03)**	**0.60**	**(0.03)**	**0.57**	**(0.03)**	**0.78**	**(0.02)**	**0.84**	**(0.01)**	**0.75**	**(0.02)**
Saskatchewan	**0.60**	**(0.02)**	**0.59**	**(0.03)**	**0.56**	**(0.02)**	**0.76**	**(0.01)**	**0.83**	**(0.01)**	**0.74**	**(0.01)**
Slovenia	0.60	(0.02)	0.59	(0.02)	0.58	(0.02)	0.77	(0.01)	0.89	(0.01)	0.77	(0.01)
Spain	0.59	(0.02)	0.59	(0.02)	0.58	(0.02)	0.76	(0.01)	0.82	(0.01)	0.76	(0.01)
Korea	0.59	(0.03)	0.59	(0.03)	0.61	(0.03)	0.76	(0.02)	0.85	(0.01)	0.75	(0.02)
Prince Edward Island	**0.59**	**(0.06)**	**0.58**	**(0.06)**	**0.58**	**(0.06)**	**0.78**	**(0.03)**	**0.84**	**(0.03)**	**0.75**	**(0.04)**
Manitoba	**0.59**	**(0.02)**	**0.58**	**(0.03)**	**0.57**	**(0.02)**	**0.75**	**(0.01)**	**0.81**	**(0.01)**	**0.74**	**(0.01)**
Alberta	**0.59**	**(0.03)**	**0.55**	**(0.03)**	**0.55**	**(0.03)**	**0.76**	**(0.02)**	**0.81**	**(0.02)**	**0.73**	**(0.02)**
Ontario	**0.57**	**(0.02)**	**0.56**	**(0.02)**	**0.54**	**(0.02)**	**0.76**	**(0.01)**	**0.82**	**(0.01)**	**0.73**	**(0.01)**
Latvia	0.57	(0.02)	0.55	(0.02)	0.57	(0.02)	0.79	(0.01)	0.88	(0.01)	0.79	(0.01)
Indonesia	0.57	(0.01)	0.55	(0.02)	0.54	(0.02)	0.77	(0.01)	0.77	(0.01)	0.72	(0.01)
New Brunswick	**0.57**	**(0.03)**	**0.55**	**(0.04)**	**0.54**	**(0.04)**	**0.75**	**(0.02)**	**0.80**	**(0.02)**	**0.75**	**(0.02)**
British Columbia	**0.56**	**(0.03)**	**0.53**	**(0.03)**	**0.54**	**(0.03)**	**0.73**	**(0.01)**	**0.82**	**(0.01)**	**0.71**	**(0.02)**
Canada	**0.56**	**(0.01)**	**0.55**	**(0.01)**	**0.54**	**(0.01)**	**0.76**	**(0.01)**	**0.81**	**(0.01)**	**0.73**	**(0.01)**
Kazakhstan	0.53	(0.01)	0.62	(0.01)	0.59	(0.02)	0.65	(0.01)	0.75	(0.01)	0.71	(0.01)
Quebec	**0.53**	**(0.02)**	**0.49**	**(0.03)**	**0.48**	**(0.03)**	**0.78**	**(0.01)**	**0.80**	**(0.01)**	**0.71**	**(0.01)**
OECD average	**0.67**	**(0.00)**	**0.66**	**(0.00)**	**0.66**	**(0.00)**	**0.80**	**(0.00)**	**0.87**	**(0.00)**	**0.80**	**(0.00)**

Cor. Correlation
SE Standard error
Note: Countries and provinces have been sorted in descending order by the correlation between performance in creative thinking and performance in mathematics. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.1.5

Relative performance: CREATIVE THINKING

Country, province, or OECD average	Relative performance in creative thinking based on performance in…											
	mathematics				reading				science			
	ARS	SE	Percentage of students who scored higher than expected	SE	ARS	SE	Percentage of students who scored higher than expected	SE	ARS	SE	Percentage of students who scored higher than expected	SE
Ontario	**5.9**	**(0.3)**	**75.6**	**(1.4)**	**4.7**	**(0.4)**	**71.3**	**(1.6)**	**5.1**	**(0.4)**	**72.5**	**(1.7)**
Alberta	**5.6**	**(0.6)**	**74.5**	**(2.2)**	**4.3**	**(0.6)**	**69.6**	**(2.8)**	**4.2**	**(0.5)**	**69.6**	**(2.5)**
Chile	5.0	(0.2)	70.9	(0.9)	1.5	(0.3)	55.1	(1.3)	2.9	(0.3)	61.0	(1.3)
Mexico	5.0	(0.2)	73.8	(1.2)	2.7	(0.2)	62.8	(1.3)	4.4	(0.2)	71.0	(1.3)
Australia	5.0	(0.2)	73.1	(1.0)	4.0	(0.2)	68.9	(1.1)	4.2	(0.2)	70.0	(1.1)
New Zealand	4.7	(0.2)	73.6	(1.3)	2.9	(0.3)	66.3	(1.4)	3.6	(0.2)	68.9	(1.2)
British Columbia	**4.6**	**(0.6)**	**70.4**	**(2.4)**	**3.6**	**(0.6)**	**66.0**	**(2.6)**	**3.8**	**(0.6)**	**67.0**	**(2.8)**
Costa Rica	4.6	(0.2)	73.3	(1.2)	1.2	(0.2)	55.2	(1.4)	2.8	(0.2)	63.2	(1.5)
Nova Scotia	**4.6**	**(0.9)**	**71.4**	**(4.5)**	**3.2**	**(0.9)**	**66.0**	**(4.5)**	**3.7**	**(0.9)**	**67.3**	**(3.9)**
Canada	**4.6**	**(0.2)**	**70.3**	**(0.7)**	**3.9**	**(0.2)**	**67.6**	**(0.8)**	**4.1**	**(0.2)**	**68.1**	**(1.0)**
El Salvador	4.5	(0.2)	66.2	(1.2)	1.4	(0.2)	51.9	(1.1)	2.0	(0.2)	54.7	(1.0)
Manitoba	**4.5**	**(0.6)**	**71.1**	**(2.6)**	**3.1**	**(0.6)**	**64.9**	**(2.8)**	**3.8**	**(0.5)**	**68.0**	**(2.6)**
Saskatchewan	**4.3**	**(0.6)**	**69.3**	**(2.4)**	**2.8**	**(0.5)**	**63.5**	**(2.8)**	**3.0**	**(0.6)**	**63.5**	**(3.1)**
Newfoundland and Labrador	**4.0**	**(1.3)**	**67.8**	**(6.0)**	**2.4**	**(1.2)**	**61.9**	**(5.6)**	**2.2**	**(1.2)**	**60.2**	**(5.3)**
Prince Edward Island	**3.8**	**(1.9)**	**67.6**	**(8.4)**	**2.3**	**(1.9)**	**62.1**	**(8.0)**	**3.1**	**(2.1)**	**64.8**	**(7.9)**
New Brunswick	**3.6**	**(1.0)**	**65.9**	**(3.9)**	**3.5**	**(1.1)**	**65.3**	**(4.6)**	**3.3**	**(1.1)**	**64.0**	**(4.6)**
Jamaica	3.5	(0.4)	59.0	(1.5)	-0.3	(0.3)	44.6	(1.8)	1.7	(0.3)	52.8	(1.7)
Finland	3.4	(0.2)	66.6	(1.0)	3.0	(0.2)	65.3	(1.0)	2.4	(0.2)	62.9	(1.2)
Uruguay	3.4	(0.3)	66.0	(1.3)	1.0	(0.3)	54.1	(1.5)	1.7	(0.3)	57.5	(1.9)
Panama	3.3	(0.3)	64.9	(1.3)	-0.9	(0.2)	42.9	(1.4)	0.8	(0.3)	51.4	(1.5)
Colombia	3.0	(0.3)	60.9	(1.3)	-0.1	(0.3)	46.9	(1.4)	0.9	(0.3)	51.2	(1.3)
Korea	2.6	(0.3)	64.9	(1.4)	3.2	(0.2)	67.0	(1.5)	3.2	(0.3)	66.6	(1.2)
Portugal	2.6	(0.2)	63.6	(1.0)	2.1	(0.2)	60.9	(1.1)	2.4	(0.2)	62.6	(1.0)
Israel	2.6	(0.2)	62.9	(1.4)	1.1	(0.3)	55.5	(1.4)	2.7	(0.3)	62.7	(1.5)
Latvia	2.6	(0.3)	64.6	(1.7)	3.4	(0.3)	67.5	(1.8)	2.7	(0.3)	64.8	(1.8)
Denmark	2.5	(0.2)	65.0	(1.3)	2.6	(0.2)	64.5	(1.2)	3.3	(0.2)	67.9	(1.4)
Singapore	2.3	(0.2)	66.1	(0.8)	4.2	(0.2)	73.7	(0.7)	3.5	(0.2)	71.0	(0.9)
Belgium	2.2	(0.2)	62.5	(1.2)	3.1	(0.2)	66.0	(1.0)	3.0	(0.2)	66.0	(1.2)
Qatar	2.0	(0.2)	55.8	(1.3)	1.2	(0.2)	53.3	(1.1)	1.2	(0.2)	53.2	(1.1)
Quebec	**1.7**	**(0.4)**	**58.8**	**(2.2)**	**2.9**	**(0.4)**	**62.6**	**(1.9)**	**2.7**	**(0.4)**	**62.0**	**(2.0)**
Poland	1.6	(0.2)	58.9	(1.4)	1.8	(0.2)	59.7	(1.2)	1.8	(0.2)	59.6	(1.3)
Spain	1.3	(0.2)	55.7	(1.0)	1.2	(0.2)	55.5	(0.9)	1.2	(0.2)	55.4	(1.1)
United Arab Emirates	1.3	(0.2)	52.8	(0.6)	2.1	(0.2)	56.2	(0.8)	1.9	(0.2)	55.2	(0.7)
Lithuania	1.3	(0.2)	56.8	(1.2)	1.5	(0.3)	57.9	(1.4)	1.4	(0.2)	57.5	(1.1)
Estonia	1.2	(0.2)	57.5	(1.2)	1.2	(0.2)	57.3	(1.2)	0.8	(0.2)	55.7	(1.3)
Brazil	1.2	(0.2)	50.4	(1.1)	-2.5	(0.2)	35.8	(1.0)	-0.5	(0.2)	43.9	(1.2)
Germany	1.1	(0.2)	56.5	(1.3)	0.7	(0.2)	54.2	(1.6)	0.7	(0.2)	54.2	(1.5)
France	1.0	(0.2)	55.0	(1.2)	1.0	(0.2)	55.9	(1.1)	0.9	(0.2)	54.9	(1.0)
Malta	0.8	(0.2)	53.8	(1.2)	2.4	(0.2)	61.2	(1.2)	1.7	(0.3)	57.2	(1.4)
Serbia	0.5	(0.3)	51.0	(1.4)	0.1	(0.3)	49.2	(1.3)	0.6	(0.3)	51.7	(1.4)
Iceland	0.4	(0.2)	51.6	(1.2)	2.3	(0.2)	60.8	(1.1)	2.4	(0.2)	60.9	(1.2)
Italy	0.2	(0.2)	50.7	(0.9)	-0.9	(0.2)	45.7	(1.2)	0.5	(0.2)	52.1	(1.2)
Czech Republic	0.1	(0.2)	51.2	(1.5)	-0.1	(0.2)	50.3	(1.4)	0.2	(0.2)	51.6	(1.2)
Saudi Arabia	0.0	(0.2)	45.5	(1.1)	0.1	(0.2)	45.9	(1.1)	0.6	(0.2)	48.2	(1.3)
Peru	0.0	(0.2)	45.4	(1.2)	-2.2	(0.2)	36.4	(1.0)	-0.9	(0.2)	41.7	(1.0)

Table B.1.5 (cont'd)

Relative performance: CREATIVE THINKING

Country, province, or OECD average	Relative performance in creative thinking based on performance in…											
	mathematics				reading				science			
	ARS	SE	Percentage of students who scored higher than expected	SE	ARS	SE	Percentage of students who scored higher than expected	SE	ARS	SE	Percentage of students who scored higher than expected	SE
Croatia	-0.1	(0.2)	49.4	(1.4)	-1.2	(0.2)	43.6	(1.2)	-0.8	(0.3)	45.8	(1.6)
Jordan	-0.2	(0.3)	43.5	(1.2)	0.7	(0.2)	46.9	(1.3)	-0.9	(0.2)	40.4	(1.2)
Malaysia	-0.2	(0.3)	46.8	(1.4)	1.3	(0.2)	53.2	(1.3)	-0.1	(0.3)	46.5	(1.4)
Netherlands	-0.3	(0.3)	49.0	(1.5)	2.4	(0.3)	62.2	(1.5)	0.9	(0.3)	54.4	(1.4)
Hungary	-0.3	(0.2)	48.3	(1.4)	-0.5	(0.2)	47.4	(1.2)	-0.6	(0.2)	47.1	(1.5)
Greece	-0.4	(0.2)	46.5	(1.5)	-1.4	(0.2)	41.5	(1.2)	-0.5	(0.2)	46.0	(1.3)
Romania	-0.7	(0.2)	45.0	(1.1)	-1.3	(0.2)	41.9	(1.3)	0.1	(0.2)	48.4	(1.2)
Slovak Republic	-1.2	(0.2)	44.1	(1.2)	0.1	(0.3)	49.1	(1.4)	-0.1	(0.2)	47.9	(1.2)
Baku (Azerbaijan)	-1.3	(0.2)	41.9	(1.1)	1.1	(0.2)	51.9	(1.4)	1.2	(0.2)	52.0	(1.3)
Ukrainian regions (18 of 27)	-1.5	(0.4)	41.1	(1.9)	-0.5	(0.4)	45.7	(1.8)	-1.4	(0.4)	41.2	(1.9)
Moldova	-1.9	(0.2)	38.0	(1.1)	-2.0	(0.2)	37.4	(1.2)	-1.2	(0.2)	41.1	(1.2)
Mongolia	-1.9	(0.2)	38.4	(1.1)	2.0	(0.2)	57.9	(1.5)	0.1	(0.3)	48.3	(1.5)
Indonesia	-1.9	(0.2)	36.1	(1.2)	-2.1	(0.2)	35.8	(1.3)	-2.9	(0.3)	32.4	(1.1)
Cyprus	-2.2	(0.2)	38.3	(1.3)	0.5	(0.2)	50.4	(1.2)	-0.8	(0.2)	44.3	(1.0)
Palestinian Authority	-2.4	(0.2)	32.9	(1.1)	-1.7	(0.3)	35.5	(1.3)	-2.1	(0.2)	34.2	(1.0)
Slovenia	-2.5	(0.2)	37.9	(1.2)	-1.1	(0.2)	43.8	(1.1)	-2.7	(0.2)	36.8	(1.1)
Dominican Republic	-2.5	(0.2)	29.7	(1.2)	-4.9	(0.2)	20.1	(0.8)	-4.3	(0.2)	23.1	(1.3)
Thailand	-2.8	(0.2)	33.4	(1.1)	-2.0	(0.2)	36.4	(1.0)	-3.5	(0.2)	30.7	(1.3)
Kazakhstan	-3.1	(0.3)	36.2	(1.0)	0.3	(0.2)	47.4	(1.0)	-1.9	(0.2)	39.6	(1.0)
North Macedonia	-4.0	(0.2)	28.1	(0.9)	-1.9	(0.2)	34.9	(1.0)	-2.6	(0.2)	32.6	(0.9)
Chinese Taipei	-4.0	(0.3)	33.9	(1.4)	-2.2	(0.3)	41.5	(1.5)	-3.0	(0.3)	37.9	(1.5)
Brunei Darussalam	-4.8	(0.2)	25.1	(1.1)	-3.8	(0.2)	28.1	(0.9)	-4.2	(0.2)	27.1	(1.0)
Hong Kong (China)	-4.9	(0.3)	29.0	(1.3)	-2.2	(0.3)	40.3	(1.6)	-3.0	(0.3)	37.2	(1.4)
Bulgaria	-5.2	(0.2)	24.0	(1.1)	-4.5	(0.2)	26.4	(1.3)	-4.8	(0.2)	25.5	(1.0)
Morocco	-5.3	(0.3)	21.4	(1.4)	-3.8	(0.3)	25.5	(1.5)	-4.8	(0.3)	23.8	(1.6)
Philippines	-5.5	(0.3)	21.1	(1.2)	-5.7	(0.3)	19.0	(1.2)	-5.1	(0.3)	22.5	(1.3)
Macao (China)	-6.0	(0.2)	24.8	(0.9)	-3.0	(0.2)	36.7	(1.0)	-4.9	(0.2)	29.0	(1.0)
Uzbekistan	-6.1	(0.2)	16.3	(1.0)	-4.4	(0.2)	22.1	(0.9)	-4.7	(0.2)	20.7	(1.0)
Albania	-7.9	(0.2)	14.2	(1.1)	-7.9	(0.2)	14.9	(0.9)	-8.1	(0.2)	14.2	(0.9)
OECD average	**1.9**	**(0.0)**	**59.5**	**(0.2)**	**1.5**	**(0.0)**	**57.5**	**(0.2)**	**1.8**	**(0.0)**	**58.6**	**(0.2)**

ARS Average relative score
SE Standard error
Note: Countries and provinces have been sorted in descending order by relative performance in creative thinking based on performance in mathematics. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.1.6a

Percentage of students at each proficiency level in anglophone and francophone school systems: CREATIVE THINKING

Canada or province	Proficiency levels													
	Below Level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Anglophone school systems														
Canada	**U‡**	**(0.0)**	**2.3**	**(0.2)**	**8.1**	**(0.5)**	**17.7**	**(0.7)**	**25.1**	**(0.7)**	**23.9**	**(0.7)**	**22.9**	**(0.9)**
Newfoundland and Labrador	U‡	(0.1)	3.9	(1.2)	14.0	(2.0)	24.7	(3.1)	26.8	(2.3)	18.8	(2.2)	11.8	(3.3)
Prince Edward Island	0.0‡	(0.0)	U‡	(1.9)	11.4	(2.8)	22.6	(3.4)	28.7	(4.4)	21.4	(3.8)	U	(6.0)
Nova Scotia	U‡	(0.1)	U	(0.9)	11.0	(1.7)	24.2	(2.2)	26.5	(1.9)	21.1	(2.4)	14.6	(2.3)
New Brunswick	U‡	(0.1)	3.7	(1.1)	12.9	(2.3)	23.0	(2.6)	27.2	(2.4)	20.0	(2.0)	13.2	(3.2)
Quebec	U‡	(0.0)	2.2	(0.7)	7.8	(1.7)	18.5	(2.8)	27.3	(2.6)	25.4	(2.4)	18.8	(4.2)
Ontario	U‡	(0.0)	1.7	(0.3)	6.8	(0.7)	16.5	(1.0)	24.9	(1.3)	25.2	(1.1)	24.8	(1.4)
Manitoba	U‡	(0.2)	2.9	(0.6)	10.0	(1.0)	22.9	(1.6)	28.5	(1.6)	21.9	(1.5)	13.8	(1.9)
Saskatchewan	U‡	(0.1)	2.9	(0.7)	12.0	(1.1)	23.5	(1.8)	27.8	(1.5)	20.8	(1.8)	13.0	(1.5)
Alberta	U‡	(0.1)	2.4‡	(0.8)	7.6	(1.4)	15.4	(1.8)	22.7	(1.9)	23.4	(1.7)	28.5	(2.6)
British Columbia	U‡	(0.1)	2.9	(0.7)	8.6	(1.1)	17.7	(1.3)	25.4	(1.5)	23.6	(1.4)	21.8	(2.2)
Francophone school systems														
Canada	**U‡**	**(0.1)**	**3.7**	**(0.6)**	**9.9**	**(1.0)**	**21.1**	**(1.3)**	**27.2**	**(1.2)**	**21.7**	**(1.3)**	**16.2**	**(1.6)**
Nova Scotia	U‡	(0.3)	U‡	(1.6)	10.0‡	(2.5)	25.0	(4.8)	26.2	(3.7)	23.0	(4.9)	13.4	(2.6)
New Brunswick	U‡	(0.2)	4.8‡	(1.6)	14.2	(2.9)	24.4	(3.6)	25.9	(3.3)	18.6	(3.3)	12.0	(3.2)
Quebec	U‡	(0.1)	3.7	(0.6)	9.6	(1.1)	20.6	(1.5)	27.1	(1.3)	22.0	(1.4)	16.8	(1.8)
Ontario	U‡	(0.2)	3.2	(1.0)	12.5	(1.7)	24.7	(2.3)	27.3	(1.8)	19.5	(2.3)	12.6	(1.9)
Manitoba	U‡	(0.4)	U‡	(1.8)	11.5	(3.2)	29.3	(3.6)	28.9	(3.6)	16.3	(2.9)	U‡	(3.4)
Saskatchewan	0.0‡	(0.0)	U‡	(3.4)	U‡	(5.9)	U‡	(9.6)	U‡	(10.3)	U‡	(7.0)	U‡	(7.7)
Alberta	U‡	(0.6)	U‡	(2.2)	12.2‡	(3.5)	24.1	(5.0)	26.8	(5.2)	20.2‡	(4.8)	12.5‡	(4.0)
British Columbia	0.0‡	(0.0)	0.0‡	(0.0)	U‡	(1.9)	32.1	(5.7)	53.2	(5.3)	U‡	(4.9)	U‡	(0.8)

SE Standard error
‡ There are fewer than 30 observations.
U Too unreliable to be published.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, results for only English-language schools are available for these provinces.

Table B.1.6b

Percentage of students in anglophone and francophone school systems who performed below Level 3, at Level 3 or above, and at Levels 5 and 6: CREATIVE THINKING

Canada or province	Below Level 3						Level 3 or above						Levels 5 and 6					
	Anglophone school systems		Francophone school systems		Difference (A - F)		Anglophone school systems		Francophone school systems		Difference (A - F)		Anglophone school systems		Francophone school systems		Difference (A - F)	
	%	SE	%	SE	Dif.	SE	%	SE	%	SE	Dif.	SE	%	SE	%	SE	Dif.	SE
Canada	**10.4**	**(0.5)**	**13.8**	**(1.3)**	**-3.4***	**(1.3)**	**89.6**	**(0.5)**	**86.2**	**(1.3)**	**3.4***	**(1.3)**	**46.8**	**(1.0)**	**37.9**	**(1.9)**	**8.9 ***	**(2.2)**
Newfoundland and Labrador	18.0**	(2.7)	--	--	--	--	82.0**	(2.7)	--	--	--	--	30.6**	(4.7)	--	--	--	--
Prince Edward Island	14.3	(4.0)	--	--	--	--	85.7	(4.0)	--	--	--	--	34.4	(7.9)	--	--	--	--
Nova Scotia	13.6	(2.2)	12.4‡	(3.2)	1.3	(4.5)	86.4	(2.2)	87.6	(3.2)	-1.3	(4.5)	35.7**	(3.6)	36.4	(5.5)	-0.7	(6.1)
New Brunswick	16.7**	(3.0)	19.1	(3.9)	-2.4	(4.5)	83.3**	(3.0)	80.9	(3.9)	2.4	(4.5)	33.1**	(4.3)	30.6	(5.3)	2.5	(6.1)
Quebec	10.0	(2.0)	13.5	(1.4)	-3.5	(2.4)	90.0	(2.0)	86.5	(1.4)	3.5	(2.4)	44.2	(5.5)	38.8**	(2.1)	5.5	(5.3)
Ontario	8.6**	(0.8)	15.9	(2.3)	-7.3*	(2.4)	91.4**	(0.8)	84.1	(2.3)	7.3*	(2.4)	50.0**	(1.6)	32.1	(3.0)	17.9*	(3.4)
Manitoba	13.0	(1.4)	16.3	(3.9)	-3.4	(4.4)	87.0	(1.4)	83.7	(3.9)	3.4	(4.4)	35.7**	(2.3)	25.4**	(4.6)	10.3	(5.5)
Saskatchewan	14.9**	(1.4)	U‡	(6.3)	--	--	85.1**	(1.4)	85.6	(6.3)	-0.5	(6.3)	33.8**	(2.4)	U‡	(10.0)	--	--
Alberta	10.1	(1.7)	16.3‡	(4.3)	-6.2	(4.6)	89.9	(1.7)	83.7	(4.3)	6.2	(4.6)	51.8	(3.0)	32.7	(6.5)	19.1*	(6.9)
British Columbia	11.6	(1.4)	U‡	(1.9)	--	--	88.4	(1.4)	97.8**	(1.9)	-9.4*	(2.4)	45.3	(2.7)	U‡	(5.3)	--	--

SE Standard error
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference within Canada or province.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, results for only English-language schools are available for these provinces.

Table B.1.7

Average scores by language of the school system: CREATIVE THINKING

Canada or province	Anglophone school systems		Francophone school systems		Difference (A - F)	
	Average	Standard error	Average	Standard error	Difference	Standard error
Canada	**38.4**	**(0.3)**	**36.1**	**(0.5)**	**2.3***	**(0.5)**
Newfoundland and Labrador	34.1**	(1.3)	--	--	--	--
Prince Edward Island	35.5	(1.8)	--	--	--	--
Nova Scotia	35.7**	(0.9)	35.8	(1.2)	-0.1	(1.5)
New Brunswick	34.8**	(1.3)	33.9	(1.4)	1.0	(1.7)
Quebec	37.9	(1.2)	36.3**	(0.5)	1.5	(1.2)
Ontario	39.3**	(0.4)	34.7	(0.7)	4.6*	(0.8)
Manitoba	35.8**	(0.6)	33.2**	(1.4)	2.6	(1.6)
Saskatchewan	35.2**	(0.6)	34.0	(2.1)	1.2	(2.1)
Alberta	39.6	(0.7)	34.5	(1.5)	5.1*	(1.7)
British Columbia	38.0	(0.7)	34.3	(1.0)	3.6*	(1.2)

-- Not available.
* Significant difference within Canada or province.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, only results for English-language schools are available for these provinces.

Table B.1.8a

Percentage of students at each proficiency level by gender: CREATIVE THINKING

Canada or province	Proficiency levels													
	Below Level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Girls														
Canada	**U‡**	**(0.0)**	**1.7**	**(0.2)**	**6.9**	**(0.6)**	**16.6**	**(0.8)**	**25.5**	**(0.8)**	**24.8**	**(0.8)**	**24.6**	**(1.0)**
Newfoundland and Labrador	0.0‡	(0.0)	U‡	(1.1)	10.1	(2.2)	22.3	(3.6)	27.6	(2.8)	23.1	(2.7)	15.1	(4.3)
Prince Edward Island	0.0‡	(0.0)	U‡	(1.8)	U‡	(3.6)	19.4	(4.3)	31.5	(6.2)	24.5	(5.3)	U‡	(6.4)
Nova Scotia	U‡	(0.1)	U‡	(0.8)	8.1	(1.7)	21.6	(2.8)	28.0	(2.9)	23.9	(3.1)	17.2	(3.4)
New Brunswick	U‡	(0.1)	U‡	(1.0)	10.8	(2.2)	20.4	(2.9)	27.8	(2.9)	21.5	(2.4)	16.9	(3.5)
Quebec	U‡	(0.1)	2.3	(0.5)	8.0	(1.2)	18.7	(2.0)	27.9	(1.4)	23.7	(1.6)	19.3	(2.1)
Ontario	U‡	(0.0)	1.1	(0.3)	5.6	(0.8)	15.1	(1.2)	24.2	(1.2)	26.4	(1.3)	27.6	(1.6)
Manitoba	U‡	(0.1)	2.1‡	(0.7)	8.0	(1.2)	20.9	(2.0)	28.8	(2.1)	23.5	(2.2)	16.7	(2.4)
Saskatchewan	U‡	(0.1)	2.2‡	(0.7)	9.8	(1.5)	21.2	(2.4)	28.5	(2.7)	22.8	(3.0)	15.4	(2.2)
Alberta	0.0‡	(0.0)	U‡	(0.8)	6.3	(1.6)	13.7	(2.2)	22.3	(2.2)	23.7	(2.6)	32.2	(3.4)
British Columbia	U‡	(0.1)	U‡	(0.7)	7.0	(1.5)	16.1	(1.9)	25.5	(2.1)	24.6	(2.2)	24.8	(3.2)
Boys														
Canada	**U‡**	**(0.1)**	**3.5**	**(0.4)**	**10.0**	**(0.6)**	**20.2**	**(0.7)**	**25.6**	**(0.9)**	**22.1**	**(0.8)**	**18.4**	**(0.8)**
Newfoundland and Labrador	U‡	(0.3)	5.9‡	(1.9)	17.5	(2.8)	26.8	(3.5)	26.0	(2.8)	14.9	(2.8)	U	(3.0)
Prince Edward Island	0.0‡	(0.0)	U‡	(2.9)	13.3‡	(3.8)	25.1	(4.5)	26.3	(5.5)	18.6	(5.3)	U‡	(7.1)
Nova Scotia	U‡	(0.1)	U‡	(1.3)	13.7	(2.2)	26.6	(2.7)	25.1	(2.5)	18.6	(3.0)	12.1	(2.1)
New Brunswick	U‡	(0.2)	5.5	(1.4)	15.7	(2.6)	26.3	(2.2)	26.0	(2.8)	17.6	(2.5)	8.9	(2.4)
Quebec	U‡	(0.2)	4.8	(0.8)	10.9	(1.1)	22.1	(1.5)	26.4	(1.8)	21.0	(1.6)	14.7	(1.7)
Ontario	U‡	(0.1)	2.5	(0.4)	8.4	(0.9)	18.6	(1.4)	25.7	(2.0)	23.6	(1.4)	21.1	(1.7)
Manitoba	U‡	(0.3)	3.7	(0.9)	12.0	(1.6)	25.2	(2.3)	28.2	(1.9)	19.9	(2.2)	10.8	(1.8)
Saskatchewan	U‡	(0.2)	3.5	(1.0)	13.9	(1.5)	25.7	(2.3)	27.2	(1.9)	18.9	(1.6)	10.7	(1.5)
Alberta	U‡	(0.3)	U‡	(1.0)	9.1	(1.9)	17.1	(2.1)	23.1	(3.2)	23.0	(2.6)	24.3	(3.2)
British Columbia	U‡	(0.2)	3.9	(1.0)	10.1	(1.4)	19.3	(1.7)	25.5	(1.9)	22.4	(2.1)	18.6	(2.1)

SE Standard error
‡ There are fewer than 30 observations.
U Too unreliable to be published.

Table B.1.8b

Percentage of boys and girls who performed below Level 3, at Level 3 or above, and at Levels 5 and 6: CREATIVE THINKING

Canada or province	Below Level 3						Level 3 or above						Levels 5 and 6					
	Girls		Boys		Difference (G - B)		Girls		Boys		Difference (G - B)		Girls		Boys		Difference (G - B)	
	%	SE	%	SE	Dif.	SE	%	SE	%	SE	Dif.	SE	%	SE	%	SE	Dif.	SE
Canada	**8.6**	**(0.6)**	**13.6**	**(0.7)**	**-5.1***	**(0.8)**	**91.4**	**(0.6)**	**86.4**	**(0.7)**	**5.1***	**(0.8)**	**49.3**	**(1.0)**	**40.5**	**(1.1)**	**8.8***	**(1.2)**
Newfoundland and Labrador	11.9	(2.8)	23.5**	(3.4)	-11.6*	(3.2)	88.1	(2.8)	76.5**	(3.4)	11.6*	(3.2)	38.3**	(5.2)	23.7**	(5.0)	14.6*	(3.9)
Prince Edward Island	U‡	(4.2)	17.5	(5.4)	--	--	89.2	(4.2)	82.5	(5.4)	6.7	(5.1)	38.3	(8.3)	31.1	(9.1)	7.2	(7.4)
Nova Scotia	9.3	(2.0)	17.5	(2.7)	-8.2*	(2.6)	90.7	(2.0)	82.5	(2.7)	8.2*	(2.6)	41.2	(4.3)	30.7**	(3.7)	10.5*	(3.9)
New Brunswick	13.4	(2.8)	21.2**	(3.1)	-7.9*	(3.0)	86.6	(2.8)	78.8**	(3.1)	7.9*	(3.0)	38.4**	(4.6)	26.5**	(3.7)	11.9*	(3.9)
Quebec	10.4	(1.4)	15.9	(1.5)	-5.6*	(1.6)	89.6	(1.4)	84.1	(1.5)	5.6*	(1.6)	43.1**	(2.5)	35.6**	(2.2)	7.5*	(2.0)
Ontario	6.7**	(0.9)	11.0**	(1.0)	-4.3*	(1.0)	93.3**	(0.9)	89.0**	(1.0)	4.3*	(1.0)	54.1**	(1.6)	44.7**	(2.1)	9.3*	(2.2)
Manitoba	10.1	(1.4)	15.9	(1.9)	-5.8*	(2.1)	89.9	(1.4)	84.1	(1.9)	5.8*	(2.1)	40.2**	(2.8)	30.7**	(2.7)	9.4*	(3.0)
Saskatchewan	12.1	(1.7)	17.5	(1.8)	-5.4*	(2.2)	87.9	(1.7)	82.5	(1.8)	5.4*	(2.2)	38.2**	(3.8)	29.6**	(2.1)	8.6*	(3.8)
Alberta	8.0	(1.9)	12.4	(2.3)	-4.4	(2.6)	92.0	(1.9)	87.6	(2.3)	4.4	(2.6)	55.9**	(3.4)	47.4**	(3.5)	8.6*	(3.5)
British Columbia	9.0	(1.5)	14.1	(2.0)	-5.2*	(2.1)	91.0	(1.5)	85.9	(2.0)	5.2*	(2.1)	49.3	(3.1)	41.0	(3.2)	8.3*	(3.1)

SE Standard error
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference within Canada or province.
** Significant difference compared to Canada.

Table B.1.9

Average scores by gender: CREATIVE THINKING

Canada, province, or OECD average	Girls		Boys		Difference (G - B)	
	Average	Standard error	Average	Standard error	Difference	Standard error
Canada	**39.3**	**(0.3)**	**36.6**	**(0.3)**	**2.6***	**(0.3)**
Newfoundland and Labrador	36.4**	(1.3)	32.0**	(1.4)	4.4*	(1.0)
Prince Edward Island	36.8	(1.8)	34.3	(2.1)	2.4	(1.4)
Nova Scotia	37.4	(1.0)	34.1**	(0.9)	3.3*	(0.8)
New Brunswick	36.5**	(1.3)	32.7**	(1.0)	3.8*	(0.9)
Quebec	37.7**	(0.6)	35.3**	(0.6)	2.5*	(0.6)
Ontario	40.4**	(0.4)	37.9**	(0.4)	2.5*	(0.4)
Manitoba	37.2**	(0.6)	34.4**	(0.7)	2.8*	(0.7)
Saskatchewan	36.5**	(0.8)	33.9**	(0.5)	2.6*	(0.7)
Alberta	40.9**	(0.9)	38.2**	(0.8)	2.7*	(0.8)
British Columbia	39.2	(0.7)	36.7	(0.8)	2.5*	(0.7)
OECD average	**34.1****	**(0.1)**	**31.3****	**(0.1)**	**2.7***	**(0.1)**

* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.

Table B.1.10

Average scores by immigrant status: CREATIVE THINKING

Canada, province, or OECD average	Non-immigrant students		Immigrant students		Second-generation immigrant students		First-generation immigrant students		Difference (immigrant students - non-immigrant students)		Difference (second-generation students - non-immigrant students)		Difference (first-generation students - non-immigrant students)		Difference (first-generation students - second-generation students)	
	Av.	SE	Av.	SE	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**38.1**	**(0.2)**	**38.8**	**(0.4)**	**40.2**	**(0.5)**	**37.3**	**(0.5)**	**0.7**	**(0.4)**	**2.0***	**(0.5)**	**-0.8**	**(0.6)**	**-2.9***	**(0.6)**
Newfoundland and Labrador	34.3**	(1.3)	32.9**	(2.5)	36.7‡	(6.6)	32.3	(2.7)	-1.4	(2.3)	2.3	(6.6)	-2.1	(2.5)	-4.4	(7.2)
Prince Edward Island	36.3	(2.1)	36.2‡	(3.6)	29.4‡	(9.6)	36.9‡	(3.6)	-0.1	(3.5)	-6.9	(9.4)	0.6	(3.6)	7.5	(9.6)
Nova Scotia	35.7**	(0.9)	39.8	(2.0)	40.7	(3.0)	39.3	(2.3)	4.1*	(1.8)	5.0	(2.8)	3.6	(2.1)	-1.4	(3.3)
New Brunswick	34.9**	(1.1)	35.5	(1.8)	34.2‡	(4.5)	35.6	(1.9)	0.6	(1.5)	-0.7	(4.1)	0.8	(1.8)	1.5	(4.8)
Quebec	37.9	(0.6)	34.7**	(0.8)	35.5**	(1.2)	33.8**	(1.0)	-3.2*	(0.8)	-2.4*	(1.0)	-4.0*	(1.2)	-1.7	(1.5)
Ontario	39.2**	(0.4)	40.2**	(0.6)	41.3**	(0.6)	38.4	(0.9)	1.0	(0.7)	2.1*	(0.6)	-0.8	(1.0)	-2.9*	(0.9)
Manitoba	35.9**	(0.7)	36.6**	(0.9)	37.0**	(1.5)	36.4	(0.9)	0.7	(1.0)	1.2	(1.4)	0.5	(1.1)	-0.6	(1.5)
Saskatchewan	35.4**	(0.5)	36.3**	(1.1)	38.1	(1.6)	35.8	(1.4)	0.9	(1.0)	2.7	(1.5)	0.4	(1.2)	-2.3	(1.9)
Alberta	39.6**	(0.8)	39.9	(1.2)	41.7	(1.5)	38.3	(1.3)	0.3	(1.2)	2.1	(1.5)	-1.4	(1.3)	-3.5*	(1.4)
British Columbia	38.0	(0.7)	39.5	(0.9)	40.5	(1.2)	38.6	(1.1)	1.5	(0.9)	2.5*	(1.1)	0.5	(1.1)	-1.9	(1.4)
OECD average	**33.4****	**(0.1)**	**28.9****	**(0.2)**	**30.7****	**(0.3)**	**27.0****	**(0.3)**	**-4.4***	**(0.2)**	**-2.7***	**(0.3)**	**-6.4***	**(0.3)**	**-3.7***	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.

Table B.1.11

Percentage of students by immigrant status who performed at Level 3 or above and at Levels 5 and 6: CREATIVE THINKING

Canada or province	Level 3 or above															
	Non-immigrant students		Immigrant students		Second-generation immigrant students		First-generation immigrant students		Difference (immigrant students - non-immigrant students)		Difference (second-generation students - non-immigrant students)		Difference (first-generation students - non-immigrant students)		Difference (first-generation students - second-generation students)	
	%	SE	%	SE	%	SE	%	SE	Dif.	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**89.1**	**(0.7)**	**89.3**	**(0.8)**	**92.1**	**(1.0)**	**86.1**	**(1.3)**	**0.2**	**(1.0)**	**3.0***	**(1.0)**	**-3.0***	**(1.5)**	**-6.0***	**(1.6)**
Newfoundland and Labrador	82.5**	(2.7)	79.6	(8.2)	87.2‡	(22.0)	78.3‡	(8.7)	-2.9	(8.3)	4.7	(22.5)	-4.2	(8.7)	-9.0	(23.7)
Prince Edward Island	88.0	(4.2)	78.8‡	(11.1)	U‡	(39.4)	81.6‡	(10.6)	-9.2	(10.8)	--	--	-6.5	(10.7)	--	--
Nova Scotia	86.0	(2.2)	91.5	(4.6)	93.6	(6.2)	90.4	(5.9)	5.5	(5.0)	7.6	(6.2)	4.4	(6.3)	-3.2	(8.0)
New Brunswick	83.1**	(2.7)	83.0	(6.6)	77.8‡	(19.9)	83.7	(7.1)	-0.1	(6.6)	-5.3	(19.0)	0.6	(7.5)	5.9	(21.5)
Quebec	88.9	(1.5)	81.7**	(2.3)	83.6**	(2.9)	79.9**	(3.3)	-7.1*	(2.7)	-5.3	(2.8)	-9.0*	(3.8)	-3.6	(4.1)
Ontario	91.1**	(1.0)	92.2**	(1.0)	94.6**	(1.0)	88.3	(1.9)	1.2	(1.2)	3.6*	(1.2)	-2.8	(2.1)	-6.4*	(2.1)
Manitoba	86.8	(1.6)	87.9	(2.2)	87.4	(4.2)	88.0	(2.5)	1.0	(2.6)	0.6	(4.1)	1.2	(3.0)	0.6	(4.7)
Saskatchewan	85.7	(1.4)	86.1	(2.8)	88.2	(4.8)	85.4	(3.3)	0.3	(2.8)	2.4	(4.9)	-0.3	(3.3)	-2.7	(5.9)
Alberta	90.5	(2.0)	88.9	(2.5)	92.3	(2.9)	85.9	(3.4)	-1.5	(2.7)	1.8	(3.0)	-4.5	(3.6)	-6.3	(4.0)
British Columbia	88.2	(1.8)	90.8	(2.1)	93.5	(2.3)	88.3	(3.0)	2.6	(2.6)	5.3	(2.8)	0.2	(3.4)	-5.1	(3.4)

SE Standard error
Dif. Difference
-- Not available.
U Too unreliable to be published.
‡ There are fewer than 30 observations.
* Significant difference within Canada or province.
** Significant difference compared to Canada.

Table B.1.11 (cont'd)

Percentage of students by immigrant status who performed at Level 3 or above and at Levels 5 and 6: CREATIVE THINKING

Canada or province	Levels 5 and 6															
	Non-immigrant students		Immigrant students		Second-generation immigrant students		First-generation immigrant students		Difference (immigrant students - non-immigrant students)		Difference (second-generation students - non-immigrant students)		Difference (first-generation students - non-immigrant students)		Difference (first-generation students - second-generation students)	
	%	SE	%	SE	%	SE	%	SE	Dif.	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**45.7**	**(1.0)**	**48.8**	**(1.7)**	**53.4**	**(2.0)**	**43.5**	**(2.3)**	**3.0**	**(1.9)**	**7.7***	**(2.0)**	**-2.2**	**(2.7)**	**-9.9***	**(2.7)**
Newfoundland and Labrador	31.5**	(4.9)	U‡	(10.1)	U‡	(28.3)	U‡	(10.8)	--	--	--	--	--	--	--	--
Prince Edward Island	37.0	(9.3)	U‡	(15.8)	U‡	(29.4)	U‡	(16.8)	--	--	--	--	--	--	--	--
Nova Scotia	35.8**	(3.7)	52.6	(9.3)	55.2‡	(16.4)	51.3	(10.4)	16.8	(8.8)	19.4	(16.1)	15.4	(9.9)	-3.9	(18.3)
New Brunswick	33.7**	(4.0)	37.2	(7.7)	U‡	(18.7)	37.8	(8.3)	3.5	(6.9)	--	--	4.2	(7.6)	--	--
Quebec	44.8	(2.4)	34.2**	(3.2)	37.0**	(5.1)	31.5**	(3.8)	-10.6*	(3.3)	-7.8	(4.5)	-13.4*	(4.7)	-5.5	(6.3)
Ontario	49.8**	(1.8)	53.2**	(2.7)	56.8	(3.2)	47.3	(3.9)	3.5	(3.1)	7.1*	(3.3)	-2.5	(4.5)	-9.6*	(4.6)
Manitoba	36.6**	(2.8)	38.4**	(3.9)	40.6**	(5.9)	37.6	(4.3)	1.9	(4.7)	4.0	(6.0)	1.0	(5.3)	-3.0	(6.2)
Saskatchewan	34.3**	(2.4)	39.0**	(4.6)	46.6	(7.9)	36.6	(5.0)	4.6	(4.5)	12.3	(7.4)	2.3	(5.1)	-10.0	(8.2)
Alberta	51.4	(3.3)	54.3	(4.8)	61.0	(6.6)	48.3	(4.9)	2.9	(5.0)	9.7	(6.5)	-3.0	(5.4)	-12.7	(6.6)
British Columbia	46.0	(2.9)	50.5	(3.8)	54.2	(5.2)	47.2	(4.3)	4.5	(3.6)	8.2	(4.9)	1.2	(4.3)	-7.0	(5.8)

SE Standard error
Dif. Difference
-- Not available.
U Too unreliable to be published.
‡ There are fewer than 30 observations.
* Significant difference within Canada or province.
** Significant difference compared to Canada.

Table B.1.12

Average scores by language spoken at home: CREATIVE THINKING

Canada or province	English		French		Other		Difference (English - French)		Difference (English - Other)		Difference (French - Other)	
	Av.	SE	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**38.4**	**(0.3)**	**37.2**	**(0.5)**	**37.9**	**(0.5)**	**1.2***	**(0.6)**	**0.5**	**(0.5)**	**-0.8**	**(0.7)**
Newfoundland and Labrador	34.2**	(1.3)	18.6‡**	(6.2)	33.2	(3.1)	15.7*	(6.4)	1.1	(2.9)	-14.6*	(6.9)
Prince Edward Island	35.8	(2.2)	37.0‡	(4.6)	35.1‡	(4.1)	-1.3	(4.9)	0.7	(4.5)	2.0	(5.6)
Nova Scotia	35.6**	(0.9)	37.1	(2.0)	38.3	(2.1)	-1.5	(2.2)	-2.7	(2.0)	-1.2	(3.1)
New Brunswick	34.9**	(1.3)	33.8**	(1.4)	35.2	(2.3)	1.1	(1.6)	-0.3	(2.0)	-1.4	(2.2)
Quebec	36.4	(1.0)	37.3	(0.6)	34.1**	(1.1)	-0.9	(1.0)	2.3	(1.3)	3.2*	(1.1)
Ontario	39.4**	(0.4)	37.1	(1.0)	39.2**	(0.8)	2.3*	(1.1)	0.2	(0.8)	-2.1	(1.3)
Manitoba	35.9**	(0.6)	33.3**	(2.0)	34.7**	(1.0)	2.6	(1.8)	1.2	(1.1)	-1.4	(2.5)
Saskatchewan	35.5**	(0.5)	28.0‡**	(3.1)	34.7**	(1.3)	7.5*	(3.1)	0.8	(1.1)	-6.7*	(3.3)
Alberta	39.7**	(0.8)	40.6	(2.9)	39.1	(1.4)	-0.9	(2.7)	0.6	(1.3)	1.5	(3.2)
British Columbia	38.1	(0.7)	35.6‡	(4.2)	38.6	(0.9)	2.5	(4.2)	-0.5	(0.8)	-3.0	(4.3)

Av. Average
SE Standard error
Dif. Difference
‡ There are fewer than 30 observations.
* Significant difference within Canada or province.
** Significant difference compared to Canada.

Table B.1.13

Percentage of students by language spoken at home who performed at Level 3 or above and at Levels 5 and 6: CREATIVE THINKING

Canada or province	Level 3 or above											
	English		French		Other		Difference (English - French)		Difference (English - Other)		Difference (French - Other)	
	%	SE	%	SE	%	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**89.3**	**(0.5)**	**87.1**	**(1.4)**	**87.3**	**(1.2)**	**2.2**	**(1.4)**	**2.0**	**(1.2)**	**-0.2**	**(1.8)**
Newfoundland and Labrador	82.4**	(2.8)	U‡	(31.4)	78.8‡	(11.3)	--	--	3.6	(11.2)	--	--
Prince Edward Island	85.5	(4.8)	95.3‡	(11.0)	75.7‡	(13.2)	-9.8	(12.8)	9.8	(13.4)	19.6	(16.9)
Nova Scotia	85.7	(2.2)	91.9	(4.9)	87.1	(5.7)	-6.2	(6.0)	-1.4	(5.5)	4.8	(7.7)
New Brunswick	83.0**	(3.1)	80.7	(4.5)	81.9	(7.4)	2.3	(5.0)	1.1	(7.5)	-1.2	(8.5)
Quebec	86.1	(2.2)	87.4	(1.5)	80.3**	(3.2)	-1.2	(2.3)	5.8	(3.5)	7.1*	(3.5)
Ontario	91.2**	(0.8)	86.6	(2.6)	91.0**	(1.4)	4.5	(2.7)	0.2	(1.4)	-4.4	(2.7)
Manitoba	86.5	(1.5)	84.8	(7.0)	84.1	(3.9)	1.7	(6.7)	2.4	(4.3)	0.7	(8.8)
Saskatchewan	85.8**	(1.4)	63.6‡	(16.3)	82.8	(3.7)	22.2	(16.1)	2.9	(3.8)	-19.3	(17.2)
Alberta	90.4	(1.8)	92.7	(7.2)	86.4	(3.4)	-2.3	(7.3)	4.0	(3.4)	6.3	(8.0)
British Columbia	88.5	(1.5)	85.0‡	(12.0)	88.1	(2.2)	3.5	(12.2)	0.4	(2.3)	-3.1	(12.3)

Canada or province	Levels 5 and 6											
	English		French		Other		Difference (English - French)		Difference (English - Other)		Difference (French - Other)	
	%	SE	%	SE	%	SE	Dif.	SE	Dif.	SE	Dif.	SE
Canada	**46.9**	**(1.0)**	**42.7**	**(2.0)**	**45.9**	**(2.1)**	**4.3**	**(2.3)**	**1.0**	**(2.2)**	**-3.2**	**(2.8)**
Newfoundland and Labrador	31.2**	(4.8)	U‡	(12.2)	U‡	(13.4)	--	--	--	--	--	--
Prince Edward Island	36.1	(9.5)	U‡	(26.2)	U‡	(17.4)	--	--	--	--	--	--
Nova Scotia	35.9**	(3.8)	40.0‡	(11.0)	48.2‡	(9.3)	-4.2	(10.9)	-12.3	(9.3)	-8.1	(14.2)
New Brunswick	33.8**	(4.4)	30.4**	(5.7)	36.8‡	(9.1)	3.4	(6.4)	-3.0	(8.6)	-6.4	(8.4)
Quebec	40.3	(4.4)	43.1	(2.3)	32.8**	(4.1)	-2.8	(4.2)	7.5	(4.9)	10.3*	(4.4)
Ontario	50.7**	(1.7)	43.4	(5.2)	49.4	(3.8)	7.3	(5.5)	1.3	(4.1)	-6.0	(7.1)
Manitoba	36.9**	(2.5)	23.1**	(7.3)	32.7**	(4.1)	13.8*	(6.9)	4.2	(4.7)	-9.6	(9.1)
Saskatchewan	35.0**	(2.4)	U‡	(11.4)	32.8**	(4.8)	--	--	2.1	(4.5)	--	--
Alberta	52.1	(3.2)	52.8‡	(15.2)	52.4	(5.5)	-0.7	(14.6)	-0.3	(5.5)	0.4	(16.1)
British Columbia	46.2	(2.8)	U‡	(16.6)	48.9	(3.7)	--	--	-2.8	(3.3)	--	--

SE Standard error
Dif. Difference
-- Not available.
U Too unreliable to be published.
‡ There are fewer than 30 observations.
* Significant difference within Canada or province.
** Significant difference compared to Canada.

Table B.1.14

Average scores by index of economic, social, and cultural status (ESCS): CREATIVE THINKING

Country, province, or OECD average	Bottom quarter		Second quarter		Third quarter		Top quarter		Difference (top quarter - bottom quarter)		Change in the average score per one (integer) unit change in the ESCS index		Explained variance in student performance (r^2 x 100)	
	Av.	SE	Av.	SE	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE
Uzbekistan	13.4	(0.3)	13.9	(0.3)	14.5	(0.4)	16.2	(0.5)	2.8*	(0.6)	1.1*	(0.2)	1.5	(0.5)
Kazakhstan	21.5	(0.4)	23.0	(0.4)	23.9	(0.4)	27.0	(0.4)	5.5*	(0.6)	2.6*	(0.3)	3.0	(0.6)
Dominican Republic	13.3	(0.3)	14.5	(0.3)	15.7	(0.3)	19.0	(0.4)	5.7*	(0.4)	2.1*	(0.2)	5.8	(0.8)
Indonesia	16.4	(0.5)	18.0	(0.5)	19.3	(0.5)	22.3	(0.7)	5.9*	(0.7)	2.3*	(0.3)	4.9	(1.1)
Morocco	13.0	(0.6)	14.9	(0.5)	15.0	(0.6)	19.0	(1.1)	6.0*	(1.1)	1.8*	(0.3)	4.3	(1.5)
Hong Kong (China)	29.0	(0.4)	31.0	(0.4)	32.0	(0.4)	35.1	(0.7)	6.1*	(0.9)	2.4*	(0.3)	5.1	(1.4)
Latvia	32.2	(0.4)	33.9	(0.4)	35.9	(0.3)	38.4	(0.4)	6.2*	(0.5)	2.9*	(0.2)	8.5	(1.3)
British Columbia	**34.9**	**(0.9)**	**37.7**	**(0.9)**	**39.4**	**(0.8)**	**41.1**	**(0.8)**	**6.2***	**(1.1)**	**3.2***	**(0.5)**	**4.6**	**(1.4)**
Jordan	17.8	(0.4)	19.2	(0.4)	20.0	(0.5)	24.1	(0.6)	6.3*	(0.8)	2.1*	(0.3)	3.7	(0.9)
Jamaica	23.1	(0.7)	25.1	(0.8)	26.4	(0.7)	29.5	(0.7)	6.4*	(0.7)	2.6*	(0.3)	3.4	(0.8)
Croatia	27.6	(0.4)	29.2	(0.4)	31.1	(0.4)	34.0	(0.4)	6.5*	(0.6)	3.0*	(0.3)	5.8	(1.0)
Albania	10.9	(0.3)	12.3	(0.4)	12.9	(0.4)	17.4	(0.6)	6.5*	(0.6)	2.2*	(0.2)	5.0	(0.9)
Korea	34.7	(0.5)	37.2	(0.5)	39.4	(0.6)	41.2	(0.5)	6.5*	(0.7)	3.2*	(0.3)	6.4	(1.2)
Saskatchewan	**32.3**	**(0.9)**	**34.1**	**(0.9)**	**35.9**	**(0.7)**	**38.9**	**(0.7)**	**6.6***	**(1.0)**	**3.3***	**(0.5)**	**5.9**	**(1.8)**
Estonia	32.7	(0.5)	35.1	(0.4)	36.7	(0.4)	39.2	(0.5)	6.6*	(0.7)	3.2*	(0.3)	6.9	(1.3)
Baku (Azerbaijan)	19.8	(0.4)	22.3	(0.3)	23.3	(0.4)	26.4	(0.5)	6.6*	(0.6)	2.6*	(0.3)	4.8	(0.9)
Denmark	31.9	(0.3)	34.7	(0.4)	37.0	(0.4)	38.5	(0.4)	6.6*	(0.5)	3.4*	(0.2)	7.6	(1.1)
Manitoba	**32.3**	**(0.7)**	**35.0**	**(0.8)**	**36.8**	**(0.9)**	**39.0**	**(0.8)**	**6.6***	**(1.0)**	**3.2***	**(0.4)**	**6.4**	**(1.5)**
Ontario	**35.7**	**(0.6)**	**38.6**	**(0.5)**	**40.7**	**(0.5)**	**42.4**	**(0.5)**	**6.8***	**(0.7)**	**3.5***	**(0.3)**	**5.9**	**(1.2)**
Macao (China)	28.3	(0.5)	30.9	(0.4)	31.9	(0.4)	35.4	(0.4)	7.1*	(0.7)	3.0*	(0.3)	6.4	(1.1)
Newfoundland and Labrador	**30.7**	**(1.4)**	**33.3**	**(1.4)**	**35.1**	**(1.8)**	**37.8**	**(1.7)**	**7.1***	**(1.5)**	**3.3***	**(0.7)**	**6.2**	**(2.6)**
Canada	**34.3**	**(0.4)**	**37.3**	**(0.4)**	**39.3**	**(0.3)**	**41.6**	**(0.4)**	**7.3***	**(0.5)**	**3.8***	**(0.2)**	**6.6**	**(0.9)**
Chile	27.5	(0.5)	30.0	(0.4)	31.4	(0.5)	34.9	(0.4)	7.4*	(0.6)	3.0*	(0.2)	6.7	(1.0)
Nova Scotia	**32.3**	**(1.4)**	**34.4**	**(1.2)**	**37.1**	**(1.0)**	**39.7**	**(1.1)**	**7.5***	**(1.2)**	**3.7***	**(0.6)**	**7.1**	**(2.1)**
Saudi Arabia	20.2	(0.4)	21.4	(0.4)	24.1	(0.5)	27.8	(0.5)	7.7*	(0.6)	2.6*	(0.2)	5.5	(0.9)
Palestinian Authority	14.7	(0.4)	17.9	(0.4)	19.0	(0.5)	22.5	(0.6)	7.7*	(0.6)	2.6*	(0.2)	5.7	(0.8)
New Brunswick	**30.8**	**(1.2)**	**33.7**	**(1.4)**	**36.0**	**(1.4)**	**38.6**	**(1.4)**	**7.9***	**(1.2)**	**4.0***	**(0.6)**	**7.8**	**(2.2)**
Spain	29.0	(0.3)	31.8	(0.3)	34.1	(0.3)	36.8	(0.3)	7.9*	(0.4)	3.0*	(0.1)	7.9	(0.8)
Alberta	**35.5**	**(1.2)**	**39.1**	**(0.9)**	**40.8**	**(1.0)**	**43.3**	**(1.1)**	**7.9***	**(1.4)**	**4.0***	**(0.6)**	**7.0**	**(2.3)**
Quebec	**32.8**	**(0.7)**	**35.4**	**(0.7)**	**38.1**	**(0.7)**	**40.7**	**(0.7)**	**7.9***	**(1.0)**	**4.3***	**(0.5)**	**7.7**	**(1.8)**
Prince Edward Island	**31.1**	**(2.4)**	**35.2**	**(2.3)**	**38.1**	**(2.6)**	**39.2**	**(2.6)**	**8.0***	**(2.2)**	**3.9***	**(1.1)**	**8.3**	**(4.3)**
Mexico	24.8	(0.4)	28.1	(0.4)	30.0	(0.4)	33.2	(0.5)	8.4*	(0.7)	2.7*	(0.2)	10.0	(1.5)
Italy	26.8	(0.5)	31.1	(0.4)	32.7	(0.3)	35.4	(0.5)	8.6*	(0.7)	3.6*	(0.2)	9.5	(1.2)
Australia	33.0	(0.4)	36.0	(0.3)	39.4	(0.3)	41.6	(0.3)	8.6*	(0.5)	4.0*	(0.3)	9.6	(1.1)
Slovenia	25.8	(0.4)	28.7	(0.4)	31.2	(0.4)	34.4	(0.4)	8.7*	(0.6)	3.9*	(0.3)	10.1	(1.4)
Serbia	24.3	(0.5)	27.8	(0.4)	30.0	(0.5)	33.1	(0.6)	8.8*	(0.7)	4.3*	(0.3)	9.5	(1.4)
United Arab Emirates	23.1	(0.3)	28.2	(0.3)	31.9	(0.3)	31.9	(0.3)	8.8*	(0.4)	4.2*	(0.2)	4.7	(0.5)
Philippines	10.2	(0.3)	13.9	(0.3)	13.6	(0.7)	19.1	(1.0)	8.8*	(1.0)	3.0*	(0.3)	6.7	(1.3)
Greece	22.5	(0.5)	26.0	(0.4)	28.2	(0.5)	31.5	(0.4)	9.0*	(0.6)	3.8*	(0.2)	11.9	(1.4)
Portugal	30.0	(0.5)	32.6	(0.4)	34.5	(0.3)	39.1	(0.4)	9.0*	(0.7)	3.0*	(0.2)	10.5	(1.4)

Table B.1.14 (cont'd)

Average scores by index of economic, social, and cultural status (ESCS): CREATIVE THINKING

Country, province, or OECD average	Bottom quarter		Second quarter		Third quarter		Top quarter		Difference (top quarter - bottom quarter)		Change in the average score per one (integer) unit change in the ESCS index		Explained variance in student performance (r^2 x 100)	
	Av.	SE	Av.	SE	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE
Cyprus	19.9	(0.3)	22.7	(0.3)	25.0	(0.4)	28.9	(0.4)	9.1*	(0.5)	3.7*	(0.2)	7.9	(0.8)
Thailand	17.5	(0.4)	19.0	(0.4)	20.7	(0.4)	26.8	(0.7)	9.3*	(0.8)	3.2*	(0.3)	10.5	(1.7)
Chinese Taipei	28.0	(0.6)	31.6	(0.5)	33.9	(0.5)	37.3	(0.5)	9.4*	(0.8)	3.9*	(0.3)	9.5	(1.6)
Finland	31.6	(0.4)	34.1	(0.4)	37.5	(0.4)	41.0	(0.4)	9.4*	(0.5)	4.4*	(0.2)	9.4	(0.9)
Singapore	35.7	(0.4)	40.1	(0.3)	42.9	(0.3)	45.2	(0.3)	9.5*	(0.5)	4.4*	(0.2)	14.1	(1.4)
Mongolia	20.4	(0.4)	23.1	(0.4)	26.4	(0.4)	29.9	(0.4)	9.5*	(0.5)	3.4*	(0.2)	12.2	(1.3)
Netherlands	28.0	(0.6)	30.7	(0.6)	34.6	(0.5)	37.7	(0.5)	9.6*	(0.7)	4.1*	(0.3)	9.7	(1.2)
Iceland	25.4	(0.5)	30.1	(0.5)	32.1	(0.5)	35.1	(0.5)	9.7*	(0.8)	4.7*	(0.4)	10.6	(1.6)
Malta	26.8	(0.5)	29.9	(0.5)	33.4	(0.4)	36.9	(0.5)	10.1*	(0.7)	3.9*	(0.3)	10.2	(1.3)
Belgium	30.0	(0.4)	33.5	(0.3)	37.1	(0.4)	40.1	(0.5)	10.1*	(0.6)	4.3*	(0.2)	14.6	(1.5)
Uruguay	24.0	(0.4)	27.3	(0.5)	29.7	(0.5)	34.1	(0.5)	10.1*	(0.6)	3.5*	(0.2)	13.8	(1.3)
Poland	29.5	(0.5)	33.3	(0.4)	36.1	(0.4)	39.8	(0.4)	10.3*	(0.6)	4.3*	(0.3)	12.7	(1.4)
Malaysia	20.8	(0.5)	23.6	(0.4)	25.4	(0.5)	31.1	(0.7)	10.3*	(0.8)	3.9*	(0.3)	11.4	(1.6)
Panama	18.4	(0.5)	21.8	(0.5)	23.6	(0.5)	29.1	(0.6)	10.6*	(0.8)	3.1*	(0.2)	13.7	(1.8)
Qatar	22.2	(0.4)	25.8	(0.5)	31.2	(0.5)	32.9	(0.5)	10.8*	(0.6)	4.6*	(0.3)	8.8	(0.9)
El Salvador	18.1	(0.4)	21.3	(0.4)	23.6	(0.5)	28.9	(0.7)	10.8*	(0.8)	3.4*	(0.2)	13.2	(1.7)
Lithuania	27.5	(0.4)	31.3	(0.4)	34.9	(0.4)	38.3	(0.4)	10.8*	(0.6)	4.8*	(0.3)	15.4	(1.4)
Czech Republic	27.1	(0.5)	31.8	(0.4)	34.0	(0.4)	38.1	(0.4)	10.9*	(0.6)	4.8*	(0.2)	15.0	(1.4)
Germany	28.2	(0.6)	31.8	(0.5)	34.0	(0.5)	39.2	(0.5)	11.0*	(0.7)	4.0*	(0.2)	13.1	(1.4)
Ukrainian regions (18 of 27)	20.8	(0.8)	25.7	(0.7)	28.5	(0.6)	31.9	(0.6)	11.1*	(0.8)	5.0*	(0.4)	13.4	(1.8)
France	26.9	(0.5)	31.0	(0.4)	34.7	(0.4)	38.1	(0.5)	11.2*	(0.7)	4.7*	(0.3)	16.1	(1.8)
Brazil	18.6	(0.3)	21.7	(0.3)	24.0	(0.4)	30.0	(0.5)	11.4*	(0.6)	3.9*	(0.2)	12.4	(1.1)
Moldova	18.7	(0.3)	22.1	(0.4)	24.9	(0.4)	30.1	(0.5)	11.5*	(0.6)	4.6*	(0.2)	14.9	(1.4)
Colombia	20.4	(0.5)	24.1	(0.5)	26.9	(0.6)	31.9	(0.6)	11.5*	(0.7)	3.6*	(0.2)	13.5	(1.6)
New Zealand	30.7	(0.4)	35.8	(0.4)	39.0	(0.5)	42.4	(0.4)	11.7*	(0.6)	4.8*	(0.2)	17.1	(1.7)
North Macedonia	13.9	(0.3)	17.6	(0.4)	20.2	(0.4)	25.7	(0.4)	11.8*	(0.5)	4.8*	(0.2)	12.2	(0.9)
Brunei Darussalam	18.6	(0.3)	20.9	(0.4)	24.7	(0.4)	31.1	(0.3)	12.5*	(0.5)	5.1*	(0.2)	15.6	(1.2)
Hungary	24.5	(0.5)	29.3	(0.4)	33.0	(0.4)	37.5	(0.5)	13.0*	(0.8)	5.3*	(0.3)	19.8	(1.8)
Israel	25.4	(0.5)	30.7	(0.5)	35.5	(0.5)	38.6	(0.4)	13.3*	(0.6)	5.7*	(0.2)	16.8	(1.3)
Peru	16.2	(0.4)	22.1	(0.4)	25.6	(0.5)	30.0	(0.5)	13.9*	(0.6)	4.3*	(0.2)	19.1	(1.6)
Slovak Republic	21.9	(0.6)	28.5	(0.6)	30.9	(0.4)	35.9	(0.5)	14.0*	(0.8)	5.5*	(0.3)	17.7	(1.8)
Bulgaria	13.7	(0.4)	19.0	(0.5)	23.0	(0.5)	27.9	(0.6)	14.2*	(0.8)	5.2*	(0.2)	19.5	(1.7)
Romania	18.9	(0.4)	24.4	(0.5)	28.0	(0.5)	34.0	(0.5)	15.1*	(0.7)	5.6*	(0.3)	22.7	(1.8)
OECD average	**28.2**	**(0.1)**	**31.8**	**(0.1)**	**34.5**	**(0.1)**	**37.8**	**(0.1)**	**9.5***	**(0.1)**	**4.0***	**(0.0)**	**11.6**	**(0.3)**

Av. Average score
SE Standard error
* Significant difference within Canada, province, or OECD.
Note: Countries and provinces have been sorted in ascending order by the difference in score points between the bottom and top quarters. See OECD (2023b) for notes regarding Israeli statistical data and Cyprus.

Table B.2.1a

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Students' ratings of how confident they felt about having to do a range of tasks reflective of creative thinking skills

Canada	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Coming up with creative ideas for school projects	6.2	(0.3)	34.4*	(0.9)	20.5	(0.6)	37.9*	(0.5)	49.9	(0.7)	39.6	(0.3)	23.4	(0.5)	40.5	(0.5)
Being creative	4.8	(0.3)	35.8*	(0.9)	17.1	(0.6)	39.1	(0.6)	49.1	(0.9)	39.2	(0.4)	29.0	(0.7)	39.9	(0.4)
Telling creative stories	7.5	(0.4)	35.4*	(0.9)	25.0	(0.7)	38.9	(0.4)	43.9	(0.8)	39.1	(0.4)	23.6	(0.6)	40.5*	(0.4)
Expressing your ideas creatively	5.9	(0.3)	37.0*	(0.8)	22.0	(0.6)	38.1	(0.5)	46.7	(0.8)	39.2	(0.4)	25.4	(0.6)	40.0	(0.5)
Making creative drawings	13.1	(0.5)	39.0	(0.6)	27.6	(0.6)	38.7	(0.4)	36.9	(1.0)	38.4	(0.4)	22.3	(0.7)	39.8*	(0.6)
Thinking of many good ideas for science experiments	9.5	(0.4)	36.7*	(0.6)	33.4	(0.8)	39.1	(0.4)	41.9	(0.7)	38.9	(0.4)	15.2	(0.6)	40.0	(0.6)
Inventing new things	9.9	(0.4)	37.9	(0.7)	34.2	(0.9)	39.6	(0.3)	40.6	(0.9)	38.9	(0.5)	15.4	(0.5)	38.6	(0.5)
Thinking of many ideas for solving disagreements with people	5.4	(0.3)	33.7*	(0.8)	20.7	(0.7)	37.6*	(0.6)	51.8	(0.8)	39.0	(0.5)	22.2	(0.7)	40.8*	(0.6)
Addressing social problems like pollution	7.2	(0.3)	35.0*	(0.7)	28.3	(0.7)	38.9	(0.5)	45.7	(0.8)	39.3	(0.4)	18.8	(0.6)	39.7	(0.5)
Coming up with many good ideas for helping people in need	4.9	(0.3)	35.0*	(0.9)	20.8	(0.6)	39.2	(0.6)	51.5	(0.9)	38.9	(0.4)	22.8	(0.7)	40.1*	(0.4)

SE Standard error
Av. Average
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1aa

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Coming up with creative ideas for school projects

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**6.2**	**(0.3)**	**34.4***	**(0.9)**	**20.5**	**(0.6)**	**37.9***	**(0.5)**	**49.9**	**(0.7)**	**39.6**	**(0.3)**	**23.4**	**(0.5)**	**40.5**	**(0.5)**
Newfoundland and Labrador	11.2	(2.0)	32.7	(2.9)	20.2	(2.1)	33.8	(2.2)	50.2	(2.6)	36.0	(1.5)	18.4	(1.9)	38.6	(1.6)
Prince Edward Island	9.5‡	(2.5)	31.4	(4.9)	20.8‡	(4.2)	31.5*	(3.1)	52.6	(4.8)	38.1	(3.1)	17.1‡	(3.2)	39.2	(3.4)
Nova Scotia	6.6	(1.2)	31.8*	(2.5)	24.4	(2.3)	35.0	(1.7)	47.6	(2.6)	37.6	(1.3)	21.4	(2.1)	38.1	(1.6)
New Brunswick	8.2	(1.1)	32.1	(2.7)	19.9	(1.7)	34.9	(1.7)	50.2	(2.0)	35.9	(1.5)	21.7	(1.7)	37.1	(1.7)
Quebec	5.3	(0.5)	31.7*	(1.8)	17.1	(1.1)	36.7	(1.3)	50.1	(1.3)	37.7	(0.8)	27.5	(1.2)	39.3	(0.8)
Ontario	5.7	(0.6)	35.2*	(1.7)	22.0	(1.1)	39.5	(0.7)	49.4	(1.3)	41.1	(0.5)	22.9	(1.1)	41.9	(0.8)
Manitoba	7.0	(0.9)	33.7	(1.8)	22.8	(1.5)	35.3	(1.1)	48.2	(1.6)	37.1	(1.0)	22.0	(1.5)	37.8	(1.1)
Saskatchewan	6.7	(1.1)	31.7*	(1.9)	25.5	(1.8)	33.9*	(1.0)	51.1	(2.2)	37.6	(0.8)	16.6	(1.4)	37.6	(1.2)
Alberta	7.1	(0.9)	37.5	(2.4)	19.9	(1.8)	39.6	(1.4)	50.9	(2.2)	40.6	(1.0)	22.1	(1.4)	41.6	(1.4)
British Columbia	6.6	(0.9)	34.4*	(2.1)	20.8	(1.7)	36.7*	(1.1)	49.8	(1.6)	40.3	(1.0)	22.8	(1.5)	40.3	(1.0)
OECD average	**10.0**	**(0.1)**	**29.6***	**(0.2)**	**27.9**	**(0.2)**	**32.8***	**(0.1)**	**45.2**	**(0.2)**	**34.1**	**(0.1)**	**16.8**	**(0.1)**	**35.5***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ab

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Being creative

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**4.8**	**(0.3)**	**35.8***	**(0.9)**	**17.1**	**(0.6)**	**39.1**	**(0.6)**	**49.1**	**(0.9)**	**39.2**	**(0.4)**	**29.0**	**(0.7)**	**39.9**	**(0.4)**
Newfoundland and Labrador	8.6	(1.4)	33.9	(2.4)	19.2	(2.1)	35.1	(2.2)	43.9	(2.7)	35.1	(1.8)	28.3	(2.4)	36.9	(1.8)
Prince Edward Island	9.8‡	(3.1)	32.9	(4.3)	21.1‡	(4.8)	36.1	(4.2)	44.4	(5.0)	37.4	(2.6)	24.6	(3.7)	38.5	(3.0)
Nova Scotia	7.7	(1.2)	33.5	(2.3)	14.5	(1.9)	37.8	(2.1)	46.9	(2.3)	37.7	(1.6)	30.9	(2.6)	37.4	(1.4)
New Brunswick	5.8	(1.0)	33.5	(2.5)	17.4	(1.5)	35.9	(1.8)	47.9	(2.1)	34.6	(1.6)	28.9	(2.0)	36.2	(1.6)
Quebec	3.4	(0.5)	32.3*	(2.2)	13.6	(0.8)	37.1	(1.2)	48.2	(1.3)	37.3	(0.9)	34.8	(1.3)	37.9	(0.8)
Ontario	4.8	(0.5)	36.4*	(1.5)	17.7	(1.2)	40.8	(0.7)	50.4	(2.0)	40.5	(0.6)	27.1	(1.5)	41.3	(0.7)
Manitoba	5.6	(0.8)	31.4*	(2.1)	20.1	(1.3)	36.2	(1.1)	45.9	(1.8)	36.2	(1.0)	28.5	(1.6)	38.7*	(1.0)
Saskatchewan	5.1	(0.7)	34.1	(2.0)	18.2	(1.4)	36.4	(1.2)	50.8	(2.0)	36.6	(1.2)	25.8	(1.4)	37.7	(1.0)
Alberta	5.3‡	(0.8)	40.9	(2.3)	19.8	(1.7)	40.6	(1.7)	48.6	(2.5)	41.1	(1.2)	26.3	(2.2)	42.3	(1.1)
British Columbia	4.7	(0.7)	35.9	(3.1)	17.4	(1.3)	38.5	(1.3)	49.2	(1.7)	39.4	(1.1)	28.7	(1.4)	40.4	(1.1)
OECD average	**6.4**	**(0.1)**	**29.7***	**(0.2)**	**21.3**	**(0.2)**	**32.7***	**(0.1)**	**47.8**	**(0.2)**	**33.4**	**(0.1)**	**24.4**	**(0.2)**	**35.5***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ac

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Telling creative stories

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**7.5**	**(0.4)**	**35.4***	**(0.9)**	**25.0**	**(0.7)**	**38.9**	**(0.4)**	**43.9**	**(0.8)**	**39.1**	**(0.4)**	**23.6**	**(0.6)**	**40.5***	**(0.4)**
Newfoundland and Labrador	13.6	(2.1)	32.2	(2.6)	26.2	(2.1)	34.8	(1.6)	39.0	(2.7)	34.0	(1.6)	21.2	(2.0)	38.1*	(1.7)
Prince Edward Island	12.0‡	(3.0)	33.0	(3.6)	31.4	(4.5)	37.4	(3.4)	32.1	(3.5)	38.0	(2.7)	24.5	(3.8)	38.0	(3.5)
Nova Scotia	8.6	(1.4)	33.5	(2.7)	26.8	(2.3)	37.0	(1.7)	41.5	(2.7)	36.4	(1.3)	23.1	(2.1)	38.4	(1.5)
New Brunswick	8.0	(1.2)	34.6	(2.0)	23.3	(1.7)	35.2	(1.6)	45.2	(2.8)	36.0	(1.5)	23.6	(2.3)	37.1	(1.7)
Quebec	5.9	(0.6)	30.9*	(1.9)	19.5	(1.1)	37.5	(1.1)	46.3	(1.3)	37.6	(1.0)	28.3	(1.3)	38.7	(1.0)
Ontario	7.6	(0.6)	37.4*	(1.2)	26.3	(1.3)	40.5	(0.6)	44.3	(1.6)	40.5	(0.6)	21.7	(1.1)	42.5*	(0.6)
Manitoba	9.6	(1.1)	33.3	(1.7)	26.8	(1.4)	36.4	(0.8)	39.2	(1.7)	36.2	(1.1)	24.3	(1.6)	38.4	(1.0)
Saskatchewan	7.1	(0.9)	33.1*	(1.7)	30.5	(1.8)	35.3	(0.9)	43.1	(1.6)	36.9	(1.0)	19.3	(1.4)	37.3	(1.2)
Alberta	6.8	(1.3)	39.5	(2.8)	26.5	(2.0)	39.8	(1.3)	44.3	(2.2)	40.3	(1.1)	22.4	(2.0)	42.1	(1.3)
British Columbia	9.1	(0.9)	34.5*	(2.2)	26.2	(1.8)	38.6	(1.3)	41.2	(1.9)	39.5	(1.0)	23.5	(1.5)	40.1	(1.2)
OECD average	**9.9**	**(0.1)**	**30.6***	**(0.2)**	**29.0**	**(0.2)**	**32.6***	**(0.1)**	**42.2**	**(0.2)**	**33.8**	**(0.1)**	**19.0**	**(0.2)**	**35.9***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ad

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Expressing your ideas creatively

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.9**	**(0.3)**	**37.0***	**(0.8)**	**22.0**	**(0.6)**	**38.1**	**(0.5)**	**46.7**	**(0.8)**	**39.2**	**(0.4)**	**25.4**	**(0.6)**	**40.0**	**(0.5)**
Newfoundland and Labrador	10.4	(1.7)	32.1	(2.9)	28.3	(2.6)	33.4	(1.7)	41.1	(2.6)	35.4	(1.7)	20.2	(1.8)	37.7	(2.0)
Prince Edward Island	U‡	(2.6)	29.4	(5.3)	28.6	(4.9)	36.4	(3.2)	46.4	(4.9)	38.2	(3.0)	17.5‡	(2.8)	36.3	(3.3)
Nova Scotia	7.5	(1.4)	34.1	(2.6)	26.7	(2.1)	37.1	(1.8)	42.7	(2.4)	37.3	(1.2)	23.2	(2.2)	36.9	(1.4)
New Brunswick	7.1	(1.2)	35.0	(2.7)	23.3	(2.0)	36.1	(1.7)	46.1	(2.0)	34.8	(1.5)	23.6	(1.9)	37.4	(1.8)
Quebec	3.6	(0.5)	31.7*	(2.1)	18.1	(1.1)	36.3	(0.9)	47.7	(1.3)	37.5	(0.8)	30.5	(1.2)	38.2	(0.9)
Ontario	6.7	(0.6)	38.3	(1.4)	22.1	(1.3)	40.4	(0.9)	47.4	(1.6)	40.9	(0.7)	23.8	(1.1)	41.4	(0.7)
Manitoba	6.9	(1.1)	31.3	(2.6)	24.5	(1.8)	35.1	(1.3)	43.2	(2.1)	36.5	(1.0)	25.4	(1.8)	39.5*	(0.9)
Saskatchewan	7.8	(1.1)	34.7	(1.6)	22.3	(1.7)	34.9	(1.0)	48.5	(1.9)	37.2	(0.9)	21.4	(1.5)	38.9	(1.0)
Alberta	6.5	(1.0)	41.9	(2.3)	23.7	(1.9)	38.4	(1.3)	46.4	(2.3)	40.4	(1.2)	23.4	(1.7)	42.0	(1.4)
British Columbia	4.9	(0.8)	38.1	(2.0)	23.5	(1.6)	37.4	(1.1)	45.6	(1.9)	39.0	(1.1)	25.9	(2.0)	39.9	(1.0)
OECD average	**7.6**	**(0.1)**	**30.6***	**(0.2)**	**26.6**	**(0.2)**	**32.7***	**(0.1)**	**46.4**	**(0.2)**	**33.7**	**(0.1)**	**19.4**	**(0.2)**	**35.5***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ae

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Making creative drawings

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**13.1**	**(0.5)**	**39.0**	**(0.6)**	**27.6**	**(0.6)**	**38.7**	**(0.4)**	**36.9**	**(1.0)**	**38.4**	**(0.4)**	**22.3**	**(0.7)**	**39.8***	**(0.6)**
Newfoundland and Labrador	15.3	(1.6)	32.3	(2.4)	30.8	(2.2)	33.8	(1.6)	33.6	(2.4)	35.7	(1.6)	20.3	(1.9)	35.2	(1.8)
Prince Edward Island	18.9‡	(4.6)	33.6	(4.0)	25.9‡	(4.8)	35.6	(2.6)	36.0	(5.7)	37.0	(3.2)	19.2‡	(5.6)	36.9	(2.8)
Nova Scotia	12.9	(1.6)	36.3	(2.0)	23.6	(2.1)	34.4	(1.6)	38.2	(2.5)	35.7	(1.5)	25.3	(2.4)	36.8	(1.5)
New Brunswick	12.8	(1.3)	36.5	(1.7)	30.4	(2.2)	34.3	(1.8)	36.6	(2.5)	34.7	(1.5)	20.2	(1.9)	35.8	(1.9)
Quebec	11.6	(0.8)	36.0	(1.5)	24.1	(1.4)	36.3	(1.1)	37.9	(1.2)	37.1	(0.8)	26.4	(1.2)	38.9	(0.8)
Ontario	13.2	(0.8)	40.8	(0.8)	30.0	(1.4)	40.2	(0.6)	36.5	(2.3)	40.0	(0.7)	20.3	(1.2)	40.8	(0.9)
Manitoba	14.6	(1.4)	35.9	(1.7)	28.5	(2.0)	36.8	(1.0)	34.4	(1.9)	34.6	(1.0)	22.4	(1.8)	38.2*	(1.1)
Saskatchewan	14.4	(1.3)	34.9	(1.3)	26.5	(1.7)	36.0	(1.0)	39.7	(1.9)	34.8	(1.2)	19.4	(1.4)	37.1	(1.1)
Alberta	17.2	(1.9)	42.4*	(1.6)	26.3	(1.6)	40.6	(1.3)	36.1	(2.0)	38.9	(1.3)	20.4	(2.0)	41.7	(1.6)
British Columbia	10.1	(1.0)	37.0	(1.3)	28.2	(1.6)	38.5	(1.1)	37.7	(1.8)	38.6	(1.0)	24.0	(1.5)	39.8	(1.2)
OECD average	**13.5**	**(0.1)**	**33.0**	**(0.1)**	**31.4**	**(0.2)**	**33.5***	**(0.1)**	**36.5**	**(0.2)**	**32.9**	**(0.1)**	**18.6**	**(0.2)**	**35.2***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1af

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Thinking of many good ideas for science experiments

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**9.5**	**(0.4)**	**36.7***	**(0.6)**	**33.4**	**(0.8)**	**39.1**	**(0.4)**	**41.9**	**(0.7)**	**38.9**	**(0.4)**	**15.2**	**(0.6)**	**40.0**	**(0.6)**
Newfoundland and Labrador	11.2	(1.7)	34.3	(2.3)	35.2	(2.3)	34.5	(1.8)	41.4	(2.7)	34.9	(1.4)	12.2	(1.5)	38.8	(2.2)
Prince Edward Island	13.7‡	(3.5)	35.3	(4.2)	42.4	(4.7)	37.5	(3.3)	33.1	(4.1)	35.7	(2.7)	10.8‡	(2.8)	38.8	(3.5)
Nova Scotia	12.1	(1.5)	34.4	(1.9)	34.3	(2.2)	37.8	(1.5)	41.3	(2.4)	37.6	(1.2)	12.2	(1.7)	36.6	(2.5)
New Brunswick	9.6	(1.4)	33.3	(2.3)	32.7	(2.1)	36.2	(1.7)	42.1	(2.6)	35.5	(1.5)	15.6	(1.7)	35.8	(2.0)
Quebec	7.9	(0.7)	35.8	(1.4)	32.2	(1.4)	36.5	(1.0)	41.9	(1.4)	37.5	(0.9)	17.9	(1.2)	37.9	(1.1)
Ontario	10.0	(0.8)	37.5*	(1.1)	33.3	(1.6)	40.7	(0.6)	41.9	(1.4)	40.4	(0.5)	14.8	(1.0)	42.2*	(0.8)
Manitoba	10.2	(1.0)	36.3	(1.9)	35.6	(2.0)	36.3	(1.2)	41.5	(2.0)	36.3	(1.0)	12.7	(1.2)	38.8	(1.3)
Saskatchewan	12.0	(1.2)	33.6*	(1.5)	36.4	(1.9)	36.9	(0.8)	38.8	(1.8)	36.6	(0.9)	12.8	(1.3)	36.6	(1.3)
Alberta	8.7	(1.4)	38.8	(2.0)	32.8	(2.4)	41.1	(1.3)	43.8	(2.0)	39.0	(1.2)	14.7	(1.6)	42.3	(1.7)
British Columbia	10.0	(1.4)	36.0*	(1.7)	34.1	(1.6)	39.7	(1.1)	41.4	(1.7)	40.1	(1.1)	14.5	(1.1)	38.4	(1.5)
OECD average	**11.9**	**(0.1)**	**31.9***	**(0.2)**	**38.3**	**(0.2)**	**33.8**	**(0.1)**	**37.9**	**(0.2)**	**33.7**	**(0.1)**	**11.8**	**(0.1)**	**34.2***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ag

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Inventing new things

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**9.9**	**(0.4)**	**37.9**	**(0.7)**	**34.2**	**(0.9)**	**39.6**	**(0.3)**	**40.6**	**(0.9)**	**38.9**	**(0.5)**	**15.4**	**(0.5)**	**38.6**	**(0.5)**
Newfoundland and Labrador	16.9	(2.3)	34.9	(2.3)	34.3	(2.5)	35.5	(1.7)	35.9	(2.6)	34.9	(1.9)	12.9	(1.5)	33.9	(2.2)
Prince Edward Island	U‡	(2.5)	35.2	(4.1)	43.4	(5.4)	38.8	(3.5)	34.6	(5.7)	35.9	(3.1)	14.9‡	(2.8)	34.8	(3.6)
Nova Scotia	15.6	(1.7)	37.1	(1.8)	34.3	(2.5)	38.0	(1.6)	37.9	(2.3)	37.0	(1.5)	12.2	(1.7)	36.4	(1.6)
New Brunswick	12.7	(1.6)	35.3	(2.4)	30.8	(2.4)	36.1	(1.6)	40.3	(2.2)	34.4	(1.3)	16.3	(1.6)	34.8	(2.0)
Quebec	6.3	(0.6)	34.5	(1.8)	27.1	(1.4)	37.7	(1.1)	45.0	(1.2)	36.9	(0.9)	21.5	(1.1)	37.6	(1.1)
Ontario	10.8	(0.7)	39.6	(1.2)	35.8	(1.4)	40.8	(0.6)	39.2	(1.6)	40.6	(0.8)	14.2	(0.8)	40.5	(0.9)
Manitoba	10.7	(1.0)	35.0	(1.8)	39.0	(2.1)	37.1	(1.0)	37.7	(1.9)	36.7	(1.0)	12.6	(1.3)	36.1	(1.5)
Saskatchewan	11.4	(1.2)	35.0	(1.4)	36.3	(1.9)	36.5	(0.8)	39.1	(1.6)	35.3	(1.2)	13.1	(1.5)	35.6	(1.4)
Alberta	11.4	(1.3)	40.2	(2.0)	36.3	(2.7)	40.9	(1.1)	40.3	(2.6)	40.4	(1.1)	12.0	(1.4)	39.1	(2.2)
British Columbia	9.0	(1.0)	36.4	(1.8)	37.4	(1.8)	40.0	(0.9)	39.6	(1.7)	39.3	(1.3)	14.1	(1.4)	39.0	(1.4)
OECD average	**9.4**	**(0.1)**	**31.6***	**(0.2)**	**32.4**	**(0.2)**	**33.7***	**(0.1)**	**42.5**	**(0.2)**	**33.2**	**(0.1)**	**15.7**	**(0.1)**	**34.2***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ah

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Thinking of many ideas for solving disagreements with people

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.4**	**(0.3)**	**33.7***	**(0.8)**	**20.7**	**(0.7)**	**37.6***	**(0.6)**	**51.8**	**(0.8)**	**39.0**	**(0.5)**	**22.2**	**(0.7)**	**40.8***	**(0.6)**
Newfoundland and Labrador	6.3‡	(1.4)	27.9*	(3.5)	22.3	(2.1)	34.2	(2.3)	52.8	(2.6)	35.9	(1.4)	18.6	(1.9)	36.5	(2.0)
Prince Edward Island	U‡	(3.0)	35.3	(3.6)	21.4	(3.8)	35.6	(3.0)	45.6	(4.8)	37.9	(3.0)	24.1	(3.6)	40.4	(3.1)
Nova Scotia	4.2	(0.6)	32.7	(2.7)	23.7	(2.4)	35.0	(1.7)	52.1	(2.7)	37.2	(1.2)	20.0	(2.2)	39.6	(1.8)
New Brunswick	7.0	(1.2)	29.6*	(2.7)	19.7	(1.7)	32.8*	(1.4)	50.1	(2.5)	35.6	(1.3)	23.2	(2.1)	38.0	(2.1)
Quebec	3.5	(0.4)	30.3*	(2.4)	16.3	(1.1)	36.4	(1.3)	54.1	(1.3)	37.4	(0.8)	26.2	(1.2)	39.3	(1.0)
Ontario	6.1	(0.6)	35.3*	(1.3)	21.4	(1.2)	40.0	(0.7)	50.0	(1.4)	40.4	(0.6)	22.5	(1.1)	42.2	(0.9)
Manitoba	7.0	(0.9)	32.0*	(2.5)	22.0	(1.5)	34.3	(1.1)	51.5	(1.7)	37.2	(1.0)	19.5	(1.3)	38.4	(1.1)
Saskatchewan	7.7	(0.9)	29.7*	(1.7)	24.3	(1.5)	33.9*	(0.8)	49.2	(1.9)	36.6	(1.1)	18.8	(1.5)	37.7	(1.2)
Alberta	5.4	(1.2)	36.4	(2.8)	22.6	(1.8)	38.5	(1.4)	51.7	(2.5)	40.5	(1.0)	20.3	(2.0)	42.2	(1.9)
British Columbia	5.4	(0.9)	33.8*	(2.1)	22.1	(1.4)	36.0*	(1.2)	53.4	(1.8)	39.1	(1.0)	19.1	(1.6)	40.7	(1.4)
OECD average	**6.4**	**(0.1)**	**29.3***	**(0.2)**	**24.1**	**(0.2)**	**32.3***	**(0.1)**	**50.0**	**(0.2)**	**34.1**	**(0.1)**	**19.5**	**(0.2)**	**35.3***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1ai

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Addressing social problems like pollution

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**7.2**	**(0.3)**	**35.0***	**(0.7)**	**28.3**	**(0.7)**	**38.9**	**(0.5)**	**45.7**	**(0.8)**	**39.3**	**(0.4)**	**18.8**	**(0.6)**	**39.7**	**(0.5)**
Newfoundland and Labrador	12.2	(1.8)	31.8*	(2.3)	27.6	(2.0)	34.1	(2.1)	42.8	(2.6)	36.8	(1.4)	17.3	(1.9)	35.4	(2.1)
Prince Edward Island	8.9‡	(2.9)	31.2	(3.9)	34.3	(4.5)	37.2	(3.3)	42.1	(5.0)	39.0	(3.1)	14.6‡	(2.7)	36.0	(3.7)
Nova Scotia	10.3	(1.5)	33.3	(2.3)	28.5	(2.3)	36.1	(1.3)	41.8	(2.5)	36.5	(1.4)	19.3	(2.4)	39.2	(1.8)
New Brunswick	8.7	(1.2)	32.3	(2.2)	31.8	(2.0)	34.9	(1.6)	42.5	(2.3)	34.3	(1.4)	17.0	(1.9)	36.6	(1.9)
Quebec	6.9	(0.7)	31.9*	(1.8)	25.3	(1.2)	37.3	(1.2)	47.4	(1.3)	37.2	(0.9)	20.4	(1.2)	37.5	(1.2)
Ontario	7.0	(0.6)	37.0*	(1.4)	27.4	(1.3)	40.2	(0.7)	45.2	(1.4)	40.9	(0.6)	20.3	(1.1)	41.3	(0.7)
Manitoba	10.2	(1.3)	33.0*	(1.6)	29.6	(1.9)	35.7	(1.0)	42.1	(1.8)	36.8	(1.1)	18.1	(1.3)	38.0	(1.3)
Saskatchewan	10.5	(1.2)	32.9*	(1.2)	31.3	(2.2)	36.0	(0.8)	43.4	(1.8)	37.3	(1.1)	14.8	(1.6)	35.9	(1.4)
Alberta	5.5	(1.3)	38.2	(3.0)	30.2	(2.7)	41.5	(1.3)	47.6	(2.3)	40.5	(1.2)	16.7	(1.7)	41.5	(1.2)
British Columbia	7.3	(1.0)	35.2*	(1.9)	31.4	(2.0)	38.4	(1.0)	44.8	(2.0)	39.5	(1.0)	16.4	(1.2)	39.1	(1.3)
OECD average	**8.1**	**(0.1)**	**30.2***	**(0.2)**	**29.5**	**(0.2)**	**33.0***	**(0.1)**	**46.1**	**(0.2)**	**34.1**	**(0.1)**	**16.3**	**(0.1)**	**34.9***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1aj

Percentage and average scores of students by students' creative self-efficacy: CREATIVE THINKING

Coming up with many good ideas for helping people in need

Canada, province, or OECD average	Not at all confident				Not very confident				Confident				Very confident			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**4.9**	**(0.3)**	**35.0***	**(0.9)**	**20.8**	**(0.6)**	**39.2**	**(0.6)**	**51.5**	**(0.9)**	**38.9**	**(0.4)**	**22.8**	**(0.7)**	**40.1***	**(0.4)**
Newfoundland and Labrador	6.1‡	(1.4)	31.4	(2.9)	23.0	(2.2)	35.4	(2.4)	49.0	(2.5)	35.7	(1.6)	22.0	(2.2)	37.0	(1.7)
Prince Edward Island	U‡	(2.8)	28.1	(6.4)	21.4	(4.2)	34.7	(2.8)	57.5	(5.3)	37.2	(3.0)	14.7‡	(3.7)	36.9	(3.8)
Nova Scotia	5.2‡	(1.0)	34.1	(2.9)	20.0	(1.8)	36.3	(1.9)	53.2	(2.7)	37.5	(1.4)	21.6	(2.2)	37.7	(1.7)
New Brunswick	7.3	(1.0)	34.3	(3.0)	19.5	(1.8)	34.6	(1.7)	51.6	(2.4)	35.2	(1.4)	21.7	(2.1)	37.0	(1.6)
Quebec	4.3	(0.5)	33.9	(1.7)	16.5	(1.0)	37.1	(1.5)	50.5	(1.5)	37.4	(0.8)	28.7	(1.3)	38.2	(1.0)
Ontario	4.9	(0.6)	36.8*	(1.7)	20.8	(1.2)	40.9	(0.8)	52.1	(2.0)	40.4	(0.6)	22.1	(1.3)	41.7	(0.7)
Manitoba	6.0	(0.8)	32.1*	(2.1)	21.7	(1.7)	36.5	(1.1)	50.1	(1.9)	36.8	(0.9)	22.2	(1.5)	38.2	(1.1)
Saskatchewan	7.9	(1.2)	30.3*	(1.6)	22.2	(1.4)	36.2	(1.0)	51.3	(1.8)	36.3	(0.8)	18.6	(1.4)	36.8	(1.1)
Alberta	4.9‡	(0.9)	37.5	(3.2)	24.4	(1.9)	41.2	(1.4)	50.7	(2.6)	39.4	(1.3)	20.1	(1.9)	43.1*	(1.5)
British Columbia	4.1	(0.8)	32.9*	(2.6)	22.9	(1.7)	38.2	(0.9)	52.7	(1.5)	38.9	(1.0)	20.4	(1.5)	39.5	(1.1)
OECD average	**6.2**	**(0.1)**	**29.5***	**(0.2)**	**23.3**	**(0.2)**	**33.0***	**(0.1)**	**50.3**	**(0.2)**	**33.8**	**(0.1)**	**20.2**	**(0.2)**	**34.3***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Confident" category.

Table B.2.1b

Index of creative self-efficacy by sociodemographic characteristics

Canada, province, or OECD average	Index of creative self-efficacy													
	All students		Anglophone school systems		Francophone school systems		Difference (A - F)		Girls		Boys		Difference (G - B)	
	Score	SE	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.15**	**(0.01)**	**0.09**	**(0.01)**	**0.34**	**(0.02)**	**-0.25***	**(0.02)**	**0.21**	**(0.01)**	**0.08**	**(0.01)**	**0.13***	**(0.02)**
Newfoundland and Labrador	-0.03**	(0.04)	-0.03	(0.04)	--	--	--	--	0.05	(0.05)	-0.11	(0.06)	0.16*	(0.08)
Prince Edward Island	-0.05**	(0.06)	-0.05	(0.06)	--	--	--	--	0.05	(0.09)	-0.16	(0.10)	0.22	(0.14)
Nova Scotia	0.07**	(0.04)	0.06	(0.04)	0.29	(0.07)	-0.23*	(0.08)	0.08	(0.06)	0.07	(0.04)	0.02	(0.07)
New Brunswick	0.11	(0.03)	0.08	(0.04)	0.19	(0.06)	-0.11	(0.07)	0.15	(0.05)	0.07	(0.05)	0.08	(0.06)
Quebec	0.32**	(0.02)	0.06	(0.04)	0.35	(0.02)	-0.29*	(0.04)	0.41	(0.03)	0.23	(0.03)	0.18*	(0.04)
Ontario	0.12**	(0.02)	0.11	(0.02)	0.26	(0.03)	-0.15*	(0.04)	0.17	(0.03)	0.06	(0.03)	0.11*	(0.04)
Manitoba	0.07**	(0.03)	0.07	(0.03)	0.23	(0.08)	-0.16	(0.09)	0.15	(0.04)	-0.01	(0.04)	0.16*	(0.05)
Saskatchewan	0.01**	(0.03)	0.01	(0.03)	0.36	(0.17)	-0.35*	(0.17)	0.13	(0.04)	-0.10	(0.04)	0.23*	(0.05)
Alberta	0.09**	(0.03)	0.08	(0.03)	0.50	(0.08)	-0.41*	(0.08)	0.12	(0.04)	0.05	(0.05)	0.07	(0.06)
British Columbia	0.13	(0.03)	0.13	(0.03)	--	--	--	--	0.22	(0.04)	0.03	(0.04)	0.18*	(0.06)
OECD average	**0.00****	**(0.00)**	**--**	**--**	**--**	**--**	**--**	**--**	**0.02**	**(0.00)**	**-0.03**	**(0.00)**	**0.05***	**(0.01)**

Canada, province, or OECD average	Index of creative self-efficacy											
	Non-immigrant students		Immigrant students		Difference (immigrant students - non-immigrant students)		Bottom quarter of the ESCS index		Top quarter of the ESCS index		Difference (top quarter - bottom quarter)	
	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.17**	**(0.01)**	**0.13**	**(0.02)**	**-0.04***	**(0.02)**	**-0.04**	**(0.02)**	**0.33**	**(0.02)**	**0.37***	**(0.02)**
Newfoundland and Labrador	-0.03	(0.04)	0.03	(0.20)	0.05	(0.19)	-0.26	(0.09)	0.21	(0.08)	0.47*	(0.12)
Prince Edward Island	-0.02	(0.07)	-0.20‡	(0.27)	-0.17	(0.28)	-0.36	(0.15)	0.12	(0.13)	0.48*	(0.21)
Nova Scotia	0.07	(0.04)	0.20	(0.14)	0.14	(0.14)	-0.01	(0.07)	0.26	(0.08)	0.28*	(0.10)
New Brunswick	0.10	(0.04)	0.16	(0.11)	0.05	(0.12)	-0.10	(0.07)	0.39	(0.07)	0.49*	(0.11)
Quebec	0.36	(0.02)	0.25	(0.05)	-0.11*	(0.05)	0.17	(0.04)	0.48	(0.04)	0.30*	(0.06)
Ontario	0.12	(0.02)	0.11	(0.03)	0.00	(0.04)	-0.09	(0.04)	0.30	(0.03)	0.39*	(0.05)
Manitoba	0.05	(0.03)	0.14	(0.06)	0.08	(0.06)	-0.14	(0.05)	0.26	(0.05)	0.40*	(0.07)
Saskatchewan	0.01	(0.03)	-0.01	(0.06)	-0.02	(0.06)	-0.20	(0.05)	0.29	(0.05)	0.49*	(0.07)
Alberta	0.11	(0.04)	0.05	(0.05)	-0.06	(0.06)	-0.09	(0.06)	0.28	(0.06)	0.36*	(0.08)
British Columbia	0.13	(0.03)	0.12	(0.04)	-0.02	(0.05)	-0.08	(0.05)	0.25	(0.06)	0.33*	(0.07)
OECD average	**0.00**	**(0.00)**	**0.00**	**(0.02)**	**0.00**	**(0.02)**	**-0.19**	**(0.01)**	**0.17**	**(0.01)**	**0.36***	**(0.01)**

SE Standard error
Av. Average
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces.

Table B.2.1c

Index of creative self-efficacy and performance in creative thinking

Canada, province, or OECD average	Score in creative thinking, by quarters of the index of creative self-efficacy				Difference in creative thinking performance between students in the top quarter and students in the bottom quarter of this index		Before accounting for gender and student socioeconomic profile								After accounting for gender and student socioeconomic profile							
	Bottom quarter		Top quarter				Change in creative thinking performance per one (integer) unit change in the index of creative self-efficacy		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of creative self-efficacy		Explained variance in student relative performance (r^2 x 100)		Change in creative thinking performance per one (integer) unit change in the index of creative self-efficacy		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of creative self-efficacy		Explained variance in student relative performance (r^2 x 100)	
	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE
Canada	**37.6**	**(0.3)**	**40.4**	**(0.4)**	**2.9***	**(0.5)**	**1.0***	**(0.2)**	**0.8**	**(0.3)**	**0.7***	**(0.2)**	**32.5**	**(1.5)**	**0.5***	**(0.2)**	**7.3**	**(0.9)**	**0.5***	**(0.2)**	**34.2**	**(1.5)**
Newfoundland and Labrador	33.5	(1.9)	37.8	(1.4)	4.4*	(1.6)	1.5*	(0.5)	2.1	(1.4)	1.0*	(0.4)	38.6	(3.7)	0.9	(0.5)	10.1	(2.9)	0.8	(0.5)	41.4	(4.0)
Prince Edward Island	34.1	(2.6)	38.0	(2.4)	3.9	(2.5)	1.5	(1.0)	2.2	(2.8)	1.3	(0.9)	36.7	(7.0)	0.9	(1.0)	8.2	(4.3)	1.0	(0.9)	39.0	(6.5)
Nova Scotia	35.3	(1.4)	38.1	(1.2)	2.7*	(1.3)	0.8	(0.5)	0.6	(0.7)	0.5	(0.4)	38.5	(3.6)	0.4	(0.5)	8.3	(2.5)	0.4	(0.4)	41.1	(3.5)
New Brunswick	34.4	(1.4)	37.0	(1.5)	2.6*	(1.2)	0.8	(0.4)	0.6	(0.6)	0.6	(0.4)	35.5	(3.6)	0.2	(0.4)	9.9	(2.6)	0.4	(0.4)	38.5	(4.0)
Quebec	35.6	(0.8)	38.6	(0.8)	3.0*	(1.2)	1.2*	(0.5)	1.2	(0.9)	1.1*	(0.5)	27.8	(2.3)	0.8	(0.5)	8.4	(1.8)	0.9	(0.5)	29.7	(2.3)
Ontario	39.3	(0.5)	42.0	(0.6)	2.8*	(0.7)	0.9*	(0.3)	0.8	(0.5)	0.6*	(0.2)	33.1	(2.5)	0.5*	(0.3)	6.4	(1.2)	0.5*	(0.2)	34.7	(2.5)
Manitoba	34.5	(1.0)	38.7	(0.8)	4.2*	(1.2)	1.3*	(0.4)	1.6	(0.9)	0.8*	(0.3)	38.5	(2.7)	0.8*	(0.4)	9.1	(1.7)	0.5	(0.3)	40.5	(2.6)
Saskatchewan	34.0	(0.6)	37.6	(0.8)	3.7*	(0.9)	1.2*	(0.4)	1.4	(0.9)	0.9*	(0.3)	39.1	(3.0)	0.7*	(0.3)	7.4	(2.1)	0.7*	(0.3)	40.5	(3.0)
Alberta	39.8	(1.0)	42.1	(1.0)	2.3*	(1.1)	0.7	(0.4)	0.4	(0.5)	0.2	(0.4)	35.2	(3.3)	0.3	(0.4)	6.7	(2.2)	0.1	(0.4)	37.0	(3.3)
British Columbia	36.7	(0.9)	40.6	(0.9)	3.9*	(1.1)	1.2*	(0.4)	1.2	(0.7)	1.0*	(0.3)	33.8	(3.5)	0.8*	(0.4)	6.5	(1.8)	0.9*	(0.3)	35.4	(3.5)
OECD average	**31.6**	**(0.1)**	**35.5**	**(0.1)**	**3.9***	**(0.1)**	**1.3***	**(0.0)**	**1.7**	**(0.1)**	**0.8***	**(0.0)**	**48.8**	**(0.4)**	**0.8***	**(0.0)**	**13.4**	**(0.3)**	**0.7***	**(0.0)**	**50.5**	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
* Significant difference within Canada, province, or OECD.
Note: "Relative performance" refers to the residual performance, attributable to purely "creative thinking" competencies, after accounting for performance in mathematics, reading, and science in a regression performed across students at the national or provincial level.

Table B.2.2a

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

Students' ratings of their agreement with statements regarding their own views on their openness to intellect

Canada	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Doing something creative satisfies me.	3.8	(0.3)	34.0*	(0.9)	13.5	(0.4)	37.6*	(0.8)	57.8	(0.6)	39.5	(0.4)	24.9	(0.6)	40.6*	(0.5)
I am very creative.	5.6	(0.3)	36.2*	(0.8)	24.0	(0.7)	38.9	(0.6)	51.1	(0.7)	38.6	(0.4)	19.3	(0.6)	40.1*	(0.5)
I like creating stories.	9.4	(0.4)	36.8*	(0.7)	30.4	(0.7)	38.3	(0.5)	41.2	(0.8)	39.0	(0.4)	19.1	(0.5)	41.0*	(0.6)
I like games that challenge my creativity.	4.5	(0.3)	34.2*	(0.9)	19.7	(0.5)	37.4*	(0.7)	53.7	(0.7)	39.3	(0.4)	22.0	(0.6)	40.2	(0.5)
I enjoy projects that require creative solutions.	6.2	(0.4)	35.4*	(0.8)	23.5	(0.6)	38.0	(0.6)	51.0	(0.8)	39.0	(0.4)	19.3	(0.5)	40.8*	(0.7)
I enjoy thinking about new ways to solve problems.	5.6	(0.3)	34.5*	(0.9)	25.6	(0.8)	38.9	(0.5)	51.9	(0.9)	39.1	(0.3)	16.9	(0.6)	41.4*	(0.5)
I enjoy solving complex problems.	11.4	(0.4)	35.3*	(0.7)	31.8	(0.7)	37.9	(0.5)	40.4	(0.7)	38.9	(0.4)	16.4	(0.7)	41.5*	(0.5)
I like school work that is challenging.	14.2	(0.6)	36.1*	(0.6)	34.8	(1.1)	39.1	(0.4)	38.0	(0.9)	39.9	(0.4)	13.0	(0.5)	40.6	(0.7)
I can suggest several solutions to problems.	6.8	(0.5)	34.5*	(0.8)	25.7	(0.7)	38.1*	(0.6)	53.4	(0.9)	39.7	(0.4)	14.2	(0.6)	41.0	(0.7)
I enjoy learning new things.	3.0	(0.2)	31.8*	(1.2)	11.1	(0.4)	36.6*	(0.8)	59.7	(0.8)	38.6	(0.4)	26.2	(0.7)	40.1*	(0.5)

SE Standard error
Av. Average
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2aa

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

Doing something creative satisfies me.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**3.8**	**(0.3)**	**34.0***	**(0.9)**	**13.5**	**(0.4)**	**37.6***	**(0.8)**	**57.8**	**(0.6)**	**39.5**	**(0.4)**	**24.9**	**(0.6)**	**40.6***	**(0.5)**
Newfoundland and Labrador	4.2‡	(0.9)	28.2*	(3.3)	17.2	(2.1)	35.1	(2.0)	58.1	(2.6)	36.0	(1.8)	20.5	(2.1)	36.9	(1.7)
Prince Edward Island	U‡	(1.7)	33.3	(6.4)	14.2‡	(2.8)	36.1	(3.5)	62.6	(4.1)	37.1	(2.6)	18.6‡	(2.9)	40.0	(2.9)
Nova Scotia	4.7	(1.1)	34.7	(2.9)	16.4	(1.7)	35.4	(1.9)	56.1	(2.8)	37.5	(1.3)	22.8	(2.4)	39.2	(1.5)
New Brunswick	4.3	(0.7)	33.0	(2.8)	15.9	(1.6)	33.0	(2.3)	56.1	(2.0)	35.2	(1.5)	23.6	(1.7)	37.2	(1.8)
Quebec	5.5	(0.8)	32.0*	(2.0)	12.6	(0.7)	37.1	(1.3)	56.1	(1.4)	37.7	(0.7)	25.9	(1.3)	38.0	(0.8)
Ontario	3.5	(0.4)	36.0*	(1.8)	12.7	(0.9)	38.8*	(1.1)	57.5	(1.2)	41.1	(0.6)	26.3	(1.0)	42.3	(0.9)
Manitoba	4.0	(0.7)	32.6	(2.2)	14.6	(1.4)	35.4	(1.4)	55.4	(1.9)	36.6	(1.0)	26.0	(1.7)	38.6	(1.0)
Saskatchewan	3.9	(0.8)	32.4	(1.9)	15.5	(1.0)	35.6	(1.3)	60.6	(1.6)	36.1	(0.6)	20.0	(1.6)	38.2	(1.1)
Alberta	2.4‡	(0.7)	36.5	(3.6)	12.0	(1.3)	38.6	(2.1)	60.1	(2.2)	40.9	(1.0)	25.4	(1.8)	42.4	(1.4)
British Columbia	3.3‡	(0.6)	33.7*	(2.9)	16.5	(1.2)	37.6	(1.4)	58.9	(1.6)	39.6	(0.9)	21.4	(1.2)	40.8	(1.2)
OECD average	**6.2**	**(0.1)**	**27.3***	**(0.2)**	**16.0**	**(0.1)**	**31.5***	**(0.2)**	**56.6**	**(0.2)**	**33.8**	**(0.1)**	**21.3**	**(0.2)**	**35.9***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ab

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I am very creative.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.6**	**(0.3)**	**36.2***	**(0.8)**	**24.0**	**(0.7)**	**38.9**	**(0.6)**	**51.1**	**(0.7)**	**38.6**	**(0.4)**	**19.3**	**(0.6)**	**40.1***	**(0.5)**
Newfoundland and Labrador	9.8	(1.4)	29.7*	(2.2)	23.2	(2.5)	34.2	(2.5)	51.6	(2.9)	34.9	(1.5)	15.4	(2.0)	39.0*	(1.7)
Prince Edward Island	7.9‡	(2.5)	30.1	(5.8)	23.5	(4.2)	37.1	(2.8)	52.7	(4.8)	35.5	(2.8)	15.8‡	(3.9)	38.8	(3.2)
Nova Scotia	5.5	(1.1)	33.9	(2.4)	23.9	(1.9)	37.9	(1.8)	51.5	(2.5)	37.7	(1.2)	19.1	(2.0)	37.6	(1.5)
New Brunswick	6.4	(0.8)	34.9	(2.2)	21.2	(1.8)	34.5	(1.7)	52.3	(2.0)	35.8	(1.3)	20.2	(1.5)	36.3	(1.5)
Quebec	5.3	(0.6)	34.0	(1.6)	23.5	(1.2)	38.0	(1.1)	49.9	(1.4)	37.1	(0.8)	21.3	(1.1)	38.2	(1.0)
Ontario	5.4	(0.5)	37.5	(1.4)	25.1	(1.2)	40.5	(0.8)	50.0	(1.4)	39.7	(0.7)	19.5	(1.0)	42.1*	(0.8)
Manitoba	6.4	(0.9)	33.9	(2.1)	25.5	(1.7)	35.0	(1.5)	48.4	(1.6)	36.1	(1.0)	19.7	(1.5)	37.3	(1.1)
Saskatchewan	5.2	(0.8)	35.5	(1.8)	26.4	(1.7)	36.1	(0.8)	51.1	(1.7)	36.3	(0.9)	17.2	(1.3)	38.2	(1.1)
Alberta	5.9	(1.0)	38.7	(2.4)	20.6	(1.9)	41.2	(1.5)	54.2	(2.1)	40.1	(1.2)	19.2	(1.6)	40.9	(1.5)
British Columbia	5.2	(0.8)	36.7	(2.3)	25.0	(1.6)	37.5	(1.3)	53.3	(1.9)	39.1	(1.1)	16.5	(1.3)	40.1	(1.3)
OECD average	**7.5**	**(0.1)**	**30.1***	**(0.2)**	**28.3**	**(0.2)**	**33.1***	**(0.1)**	**48.5**	**(0.2)**	**33.8**	**(0.1)**	**15.7**	**(0.1)**	**34.9***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ac

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I like creating stories.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**9.4**	**(0.4)**	**36.8***	**(0.7)**	**30.4**	**(0.7)**	**38.3**	**(0.5)**	**41.2**	**(0.8)**	**39.0**	**(0.4)**	**19.1**	**(0.5)**	**41.0***	**(0.6)**
Newfoundland and Labrador	11.9	(1.6)	31.2	(3.0)	34.6	(2.5)	34.6	(1.8)	40.0	(2.7)	35.7	(2.0)	13.6	(2.0)	38.0	(1.8)
Prince Edward Island	19.0‡	(4.7)	34.6	(4.2)	23.8‡	(5.5)	32.4	(5.1)	40.3	(5.9)	37.1	(2.8)	16.9‡	(4.6)	38.3	(4.1)
Nova Scotia	13.1	(1.6)	35.6	(2.1)	28.0	(2.4)	37.2	(2.1)	40.6	(2.9)	36.3	(1.5)	18.3	(2.0)	37.4	(1.5)
New Brunswick	11.1	(1.2)	32.3*	(2.2)	28.5	(2.0)	34.9	(1.5)	42.1	(1.9)	36.4	(1.5)	18.3	(1.7)	37.1	(1.7)
Quebec	10.0	(0.9)	35.9	(1.4)	30.1	(1.2)	36.6	(0.8)	39.6	(1.1)	37.8	(0.7)	20.3	(1.2)	39.3	(0.9)
Ontario	9.2	(0.8)	38.2	(1.2)	30.8	(1.2)	40.0	(0.7)	41.4	(1.6)	40.6	(0.6)	18.6	(0.9)	42.1	(0.8)
Manitoba	8.6	(1.0)	34.2	(1.8)	29.6	(1.7)	34.7	(1.0)	40.8	(2.0)	36.0	(1.1)	21.0	(1.6)	38.8	(1.3)
Saskatchewan	10.1	(1.1)	33.9	(1.3)	31.3	(1.7)	34.4	(1.1)	40.8	(1.8)	36.1	(1.0)	17.9	(1.4)	38.8*	(1.2)
Alberta	9.2	(1.5)	39.8	(1.8)	30.7	(1.9)	39.6	(1.2)	41.5	(2.2)	39.4	(1.3)	18.6	(1.9)	42.6	(1.5)
British Columbia	7.6	(1.1)	34.3*	(2.2)	29.9	(1.7)	38.0	(1.0)	43.0	(1.8)	39.0	(1.2)	19.5	(1.2)	41.8*	(1.3)
OECD average	**11.0**	**(0.1)**	**30.2***	**(0.2)**	**32.0**	**(0.2)**	**32.5***	**(0.1)**	**41.1**	**(0.2)**	**34.1**	**(0.1)**	**15.9**	**(0.2)**	**36.2***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ad

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I like games that challenge my creativity.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**4.5**	**(0.3)**	**34.2***	**(0.9)**	**19.7**	**(0.5)**	**37.4***	**(0.7)**	**53.7**	**(0.7)**	**39.3**	**(0.4)**	**22.0**	**(0.6)**	**40.2**	**(0.5)**
Newfoundland and Labrador	7.4‡	(1.4)	31.1	(3.1)	22.6	(2.2)	33.6	(1.8)	50.9	(3.1)	35.2	(1.8)	19.1	(2.2)	37.4	(1.7)
Prince Edward Island	U‡	(2.4)	27.2*	(5.0)	21.8	(4.3)	36.3	(3.4)	44.7	(4.7)	38.0	(3.2)	26.2	(4.6)	40.0	(2.8)
Nova Scotia	4.7	(1.0)	32.6	(2.7)	19.4	(1.6)	34.8	(1.6)	54.6	(2.6)	37.6	(1.3)	21.3	(2.1)	38.7	(1.6)
New Brunswick	6.6	(1.2)	33.8	(2.5)	19.9	(1.7)	33.5	(1.6)	49.5	(2.1)	36.0	(1.6)	24.0	(2.1)	35.8	(1.8)
Quebec	4.9	(0.6)	33.1	(2.3)	20.1	(1.1)	35.9	(1.1)	51.9	(1.4)	37.6	(0.8)	23.1	(1.2)	38.1	(1.0)
Ontario	4.6	(0.6)	36.5*	(1.6)	19.6	(1.1)	38.8*	(0.9)	55.2	(1.1)	41.0	(0.5)	20.6	(1.0)	41.6	(0.8)
Manitoba	5.4	(0.8)	32.6	(2.0)	18.7	(1.4)	35.0	(1.2)	54.5	(1.9)	36.3	(0.8)	21.4	(1.6)	38.5	(1.3)
Saskatchewan	4.7	(0.7)	28.8*	(2.0)	20.9	(1.7)	36.1	(1.2)	55.6	(1.8)	36.0	(1.0)	18.7	(1.5)	38.0	(1.3)
Alberta	3.5‡	(0.7)	35.1	(4.2)	18.9	(1.7)	38.8	(1.8)	53.8	(2.3)	40.8	(1.0)	23.8	(1.8)	42.0	(1.6)
British Columbia	3.6‡	(0.7)	32.2*	(2.6)	20.0	(1.4)	37.6	(1.1)	53.1	(1.7)	38.8	(1.0)	23.3	(1.5)	40.3	(1.3)
OECD average	**6.3**	**(0.1)**	**29.0***	**(0.2)**	**22.0**	**(0.2)**	**32.5***	**(0.1)**	**53.2**	**(0.2)**	**33.9**	**(0.1)**	**18.5**	**(0.2)**	**35.5***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ae

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I enjoy projects that require creative solutions.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**6.2**	**(0.4)**	**35.4***	**(0.8)**	**23.5**	**(0.6)**	**38.0**	**(0.6)**	**51.0**	**(0.8)**	**39.0**	**(0.4)**	**19.3**	**(0.5)**	**40.8***	**(0.7)**
Newfoundland and Labrador	8.5	(1.4)	32.8	(3.0)	21.6	(2.0)	34.2	(1.9)	51.9	(2.3)	34.8	(1.5)	18.1	(2.0)	37.5	(1.7)
Prince Edward Island	7.3‡	(2.4)	26.2*	(4.1)	22.7‡	(4.1)	34.8	(3.6)	53.2	(5.1)	37.9	(2.3)	16.8‡	(3.6)	38.2	(3.3)
Nova Scotia	6.5	(1.2)	32.1*	(2.1)	25.3	(2.1)	35.7	(1.8)	48.2	(2.5)	37.3	(1.2)	20.0	(2.1)	38.5	(1.7)
New Brunswick	8.3	(1.1)	33.3	(2.2)	25.5	(2.0)	34.3	(1.5)	46.4	(1.9)	35.4	(1.5)	19.8	(1.8)	36.6	(2.1)
Quebec	6.6	(0.7)	33.8*	(1.8)	23.5	(0.9)	37.0	(1.1)	49.4	(1.3)	37.6	(0.8)	20.5	(1.1)	38.6	(1.1)
Ontario	6.0	(0.7)	37.0*	(1.3)	24.4	(1.0)	39.6	(0.8)	49.8	(1.4)	40.4	(0.5)	19.8	(0.8)	42.4*	(0.9)
Manitoba	6.1	(0.8)	31.9*	(2.1)	24.8	(1.6)	35.2	(1.2)	49.8	(2.1)	36.8	(0.8)	19.3	(1.4)	39.0	(1.3)
Saskatchewan	6.4	(0.8)	33.1	(1.7)	24.4	(1.6)	34.1*	(1.3)	53.2	(1.8)	36.5	(0.9)	16.0	(1.5)	37.4	(1.4)
Alberta	5.4	(0.9)	39.5	(2.5)	21.3	(2.1)	39.5	(1.7)	55.4	(2.3)	39.7	(1.0)	17.9	(1.8)	42.4	(1.6)
British Columbia	5.9	(1.0)	33.8*	(2.1)	23.1	(1.7)	37.2	(1.4)	52.6	(1.7)	39.6	(0.9)	18.5	(1.3)	41.4	(1.2)
OECD average	**7.4**	**(0.1)**	**29.5***	**(0.2)**	**26.2**	**(0.2)**	**32.3***	**(0.1)**	**50.7**	**(0.2)**	**34.0**	**(0.1)**	**15.8**	**(0.1)**	**35.7***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2af

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I enjoy thinking about new ways to solve problems.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.6**	**(0.3)**	**34.5***	**(0.9)**	**25.6**	**(0.8)**	**38.9**	**(0.5)**	**51.9**	**(0.9)**	**39.1**	**(0.3)**	**16.9**	**(0.6)**	**41.4***	**(0.5)**
Newfoundland and Labrador	7.0	(1.2)	28.7*	(2.7)	34.6	(2.4)	34.9	(1.7)	45.9	(2.5)	34.6	(1.8)	12.5	(1.8)	39.5*	(2.2)
Prince Edward Island	10.2‡	(3.3)	30.4	(5.0)	25.7	(4.6)	36.7	(3.2)	49.3	(5.4)	38.1	(3.3)	14.7‡	(3.1)	41.4	(3.2)
Nova Scotia	7.1	(1.2)	32.0*	(2.0)	26.2	(2.3)	36.6	(1.7)	50.8	(2.5)	36.6	(1.5)	15.9	(1.9)	40.3	(1.5)
New Brunswick	5.8	(1.1)	31.8	(2.3)	28.2	(1.9)	34.9	(1.5)	50.7	(1.8)	35.5	(1.4)	15.3	(1.6)	36.3	(2.1)
Quebec	5.5	(0.6)	32.0*	(1.9)	24.6	(1.1)	37.5	(0.9)	50.9	(1.2)	37.6	(0.9)	19.0	(1.2)	38.7	(0.9)
Ontario	6.3	(0.6)	36.1*	(1.3)	24.6	(1.4)	40.4	(0.8)	53.1	(1.9)	40.4	(0.5)	16.1	(1.1)	43.4*	(0.8)
Manitoba	6.4	(0.9)	31.1*	(1.9)	29.0	(1.5)	36.5	(1.0)	48.5	(1.9)	36.4	(0.9)	16.2	(1.4)	37.4	(1.1)
Saskatchewan	5.7	(0.7)	33.7	(1.7)	26.8	(1.5)	34.5	(1.0)	54.1	(1.6)	36.1	(0.9)	13.3	(1.1)	37.8	(1.4)
Alberta	4.5‡	(0.7)	39.4	(2.7)	26.3	(1.8)	41.3	(1.4)	51.8	(2.2)	40.5	(1.0)	17.5	(1.8)	44.5*	(1.6)
British Columbia	4.4	(0.7)	31.5*	(2.1)	26.4	(2.0)	38.4	(1.2)	52.2	(2.1)	39.1	(1.1)	17.0	(1.4)	40.0	(1.4)
OECD average	**6.3**	**(0.1)**	**28.7***	**(0.2)**	**25.3**	**(0.2)**	**32.8***	**(0.1)**	**53.1**	**(0.2)**	**33.9**	**(0.1)**	**15.3**	**(0.1)**	**35.2***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ag

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I enjoy solving complex problems.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**11.4**	**(0.4)**	**35.3***	**(0.7)**	**31.8**	**(0.7)**	**37.9**	**(0.5)**	**40.4**	**(0.7)**	**38.9**	**(0.4)**	**16.4**	**(0.7)**	**41.5***	**(0.5)**
Newfoundland and Labrador	16.1	(1.9)	31.1*	(1.9)	37.9	(2.6)	33.8	(1.8)	34.9	(2.7)	36.4	(1.7)	11.1	(1.6)	39.2	(2.0)
Prince Edward Island	15.1‡	(3.5)	36.4	(3.8)	37.4	(4.8)	34.9	(3.1)	35.5	(5.2)	36.8	(3.0)	12.0‡	(3.2)	41.6	(4.1)
Nova Scotia	15.9	(1.8)	34.8	(1.9)	31.5	(2.3)	35.0	(1.5)	38.4	(2.6)	36.6	(1.5)	14.2	(2.0)	40.0	(1.7)
New Brunswick	10.3	(1.3)	33.5	(2.2)	29.8	(2.2)	34.8	(1.8)	45.0	(1.9)	35.3	(1.4)	14.8	(1.5)	36.8	(1.9)
Quebec	14.4	(1.0)	34.7	(1.5)	28.7	(1.2)	36.8	(0.9)	39.1	(1.4)	37.5	(0.8)	17.8	(1.2)	38.5	(1.1)
Ontario	10.7	(0.7)	36.7*	(0.9)	32.3	(1.6)	39.4	(1.0)	40.7	(1.4)	40.3	(0.6)	16.3	(1.1)	43.2*	(0.8)
Manitoba	12.2	(1.1)	33.8	(1.6)	31.5	(1.9)	35.5	(0.9)	40.1	(1.5)	36.3	(0.8)	16.2	(1.6)	38.7	(1.4)
Saskatchewan	9.5	(0.9)	32.8	(1.3)	35.2	(1.8)	33.9	(1.0)	39.7	(1.7)	35.8	(1.1)	15.6	(1.4)	38.0	(1.5)
Alberta	10.9	(1.2)	35.5*	(2.2)	33.8	(1.8)	39.4	(1.2)	39.3	(1.9)	40.1	(0.8)	16.1	(1.5)	44.9*	(1.7)
British Columbia	8.1	(1.0)	34.9*	(1.8)	31.9	(1.7)	37.1	(0.9)	43.8	(2.0)	39.1	(1.1)	16.2	(1.4)	41.2	(1.4)
OECD average	**12.2**	**(0.1)**	**30.8***	**(0.2)**	**34.6**	**(0.2)**	**33.2***	**(0.1)**	**40.4**	**(0.2)**	**34.0**	**(0.1)**	**12.8**	**(0.1)**	**35.4***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ah

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I like school work that is challenging.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**14.2**	**(0.6)**	**36.1***	**(0.6)**	**34.8**	**(1.1)**	**39.1**	**(0.4)**	**38.0**	**(0.9)**	**39.9**	**(0.4)**	**13.0**	**(0.5)**	**40.6**	**(0.7)**
Newfoundland and Labrador	22.2	(2.4)	32.7	(1.9)	41.6	(2.9)	34.7	(1.9)	29.4	(2.7)	35.6	(1.6)	6.8	(1.2)	40.1	(2.6)
Prince Edward Island	23.5‡	(4.9)	35.4	(3.1)	30.9	(4.5)	37.7	(3.6)	34.2	(5.3)	37.5	(2.9)	11.4‡	(3.4)	41.3	(4.3)
Nova Scotia	20.5	(2.1)	34.6*	(1.6)	37.6	(2.6)	36.2	(1.6)	31.5	(2.3)	39.0	(1.4)	10.5	(1.4)	40.8	(2.3)
New Brunswick	14.5	(1.6)	31.3*	(1.9)	30.5	(2.5)	34.8	(1.3)	41.6	(2.3)	36.3	(1.4)	13.4	(1.4)	36.2	(1.8)
Quebec	8.5	(0.7)	32.5*	(1.4)	21.9	(1.1)	37.6	(1.1)	47.8	(1.3)	38.2	(0.9)	21.7	(1.1)	38.5	(1.2)
Ontario	14.9	(1.0)	38.3*	(0.9)	39.4	(2.3)	40.1*	(0.7)	35.3	(1.7)	42.0	(0.5)	10.4	(1.0)	42.0	(1.1)
Manitoba	17.4	(1.5)	34.7	(1.2)	35.5	(1.7)	35.8	(0.9)	35.7	(1.6)	36.9	(0.9)	11.4	(1.2)	41.3*	(1.3)
Saskatchewan	11.0	(1.1)	33.5*	(1.3)	39.6	(1.8)	36.1	(0.8)	39.5	(1.6)	36.5	(0.9)	9.9	(1.1)	39.1	(1.6)
Alberta	18.3	(2.2)	38.1	(1.4)	35.9	(2.7)	40.6	(1.2)	33.7	(2.5)	40.6	(1.0)	12.1	(1.5)	43.9	(1.9)
British Columbia	14.9	(1.5)	33.6*	(1.5)	39.9	(1.9)	39.3	(0.8)	35.9	(1.7)	40.8	(1.0)	9.3	(1.2)	41.3	(1.5)
OECD average	**15.5**	**(0.1)**	**31.0***	**(0.1)**	**36.4**	**(0.2)**	**33.6***	**(0.1)**	**37.9**	**(0.2)**	**34.0**	**(0.1)**	**10.3**	**(0.1)**	**34.7***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2ai

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I can suggest several solutions to problems.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**6.8**	**(0.5)**	**34.5***	**(0.8)**	**25.7**	**(0.7)**	**38.1***	**(0.6)**	**53.4**	**(0.9)**	**39.7**	**(0.4)**	**14.2**	**(0.6)**	**41.0**	**(0.7)**
Newfoundland and Labrador	7.4	(1.5)	30.7	(3.7)	36.6	(3.0)	34.2	(1.8)	47.1	(2.4)	35.3	(1.5)	8.9	(1.7)	38.8	(2.6)
Prince Edward Island	U‡	(2.7)	36.4	(4.8)	31.5	(5.2)	37.8	(2.6)	50.7	(5.2)	36.2	(2.8)	11.2‡	(2.8)	37.6	(3.4)
Nova Scotia	6.8	(1.1)	32.9	(2.2)	27.1	(1.9)	36.1	(1.3)	49.7	(2.4)	37.4	(1.5)	16.3	(2.0)	39.4	(1.7)
New Brunswick	6.9	(1.0)	31.7	(2.3)	25.3	(1.9)	33.9	(1.5)	51.7	(2.1)	35.7	(1.2)	16.0	(1.7)	39.1	(2.2)
Quebec	6.7	(0.8)	32.0*	(1.7)	22.1	(1.0)	36.5	(1.1)	55.1	(1.5)	37.7	(0.8)	16.1	(1.1)	38.9	(1.3)
Ontario	6.5	(0.7)	35.7*	(1.4)	26.6	(1.3)	39.8	(0.8)	53.1	(1.6)	41.5	(0.6)	13.8	(0.9)	42.6	(1.0)
Manitoba	7.5	(0.9)	32.7*	(1.8)	31.9	(2.2)	34.8*	(1.3)	47.5	(1.8)	38.0	(1.0)	13.0	(1.4)	39.6	(1.4)
Saskatchewan	7.2	(1.1)	32.9*	(1.7)	26.0	(1.6)	34.4*	(1.0)	55.3	(1.8)	37.1	(1.0)	11.5	(1.1)	38.5	(1.4)
Alberta	7.7	(1.5)	39.1	(2.3)	23.8	(2.2)	39.8	(1.4)	54.0	(2.6)	40.8	(0.9)	14.5	(1.6)	42.6	(1.8)
British Columbia	6.0	(0.9)	31.4*	(2.0)	27.7	(1.7)	37.7	(1.1)	53.2	(1.8)	39.4	(0.9)	13.2	(1.5)	40.8	(1.7)
OECD average	**6.9**	**(0.1)**	**28.3***	**(0.2)**	**25.8**	**(0.2)**	**32.5***	**(0.1)**	**53.6**	**(0.2)**	**34.4**	**(0.1)**	**13.6**	**(0.1)**	**34.5**	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2aj

Percentage and average scores of students by students' openness to intellect: CREATIVE THINKING

I enjoy learning new things.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**3.0**	**(0.2)**	**31.8***	**(1.2)**	**11.1**	**(0.4)**	**36.6***	**(0.8)**	**59.7**	**(0.8)**	**38.6**	**(0.4)**	**26.2**	**(0.7)**	**40.1***	**(0.5)**
Newfoundland and Labrador	7.0‡	(1.3)	29.6	(3.2)	12.6	(1.5)	33.6	(2.2)	62.5	(2.7)	35.2	(1.6)	17.9	(2.0)	37.2	(2.1)
Prince Edward Island	U‡	(1.3)	34.1	(7.1)	8.6‡	(2.6)	30.6	(3.6)	60.4	(5.5)	37.6	(2.9)	28.6	(5.1)	35.7	(3.8)
Nova Scotia	3.2‡	(0.8)	30.7	(3.4)	14.9	(1.9)	33.8	(1.8)	57.7	(2.7)	37.3	(1.5)	24.2	(2.3)	37.9	(1.6)
New Brunswick	4.9	(1.1)	31.2	(3.1)	15.0	(1.7)	33.4	(1.9)	55.4	(2.3)	35.3	(1.6)	24.8	(2.0)	37.0	(1.6)
Quebec	3.5	(0.5)	30.7*	(1.9)	9.8	(0.8)	36.3	(1.3)	55.6	(1.3)	36.5	(0.8)	31.1	(1.2)	38.8*	(0.9)
Ontario	2.5	(0.4)	31.7*	(2.1)	10.6	(0.9)	37.4*	(1.3)	61.4	(1.7)	40.3	(0.6)	25.5	(1.4)	41.3	(0.8)
Manitoba	4.4	(0.7)	30.3*	(2.6)	12.8	(1.1)	34.1	(1.4)	55.9	(2.1)	36.2	(0.8)	26.9	(1.7)	37.7	(1.1)
Saskatchewan	3.3	(0.6)	31.0*	(2.6)	13.1	(1.3)	33.1*	(1.2)	64.4	(1.8)	36.6	(0.8)	19.1	(1.4)	36.9	(1.2)
Alberta	2.4‡	(0.6)	34.5	(3.5)	11.2	(1.3)	39.8	(2.2)	61.4	(2.0)	39.4	(1.1)	25.0	(1.9)	41.6	(1.6)
British Columbia	2.6‡	(0.6)	34.0	(2.9)	11.7	(1.2)	35.1*	(1.5)	60.9	(1.7)	38.6	(0.9)	24.8	(1.5)	40.6	(1.3)
OECD average	**4.3**	**(0.1)**	**26.3***	**(0.2)**	**13.1**	**(0.1)**	**30.2***	**(0.2)**	**59.1**	**(0.2)**	**33.8**	**(0.1)**	**23.5**	**(0.2)**	**35.6***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.2b

Index of students' openness to intellect by sociodemographic characteristics

Canada, province, or OECD average	Index of students' openness to intellect: All students		Anglophone school systems		Francophone school systems		Difference (A - F)		Girls		Boys		Difference (G - B)	
	Score	SE	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.11**	**(0.01)**	**0.10**	**(0.01)**	**0.16**	**(0.02)**	**-0.06***	**(0.03)**	**0.13**	**(0.01)**	**0.09**	**(0.01)**	**0.04***	**(0.02)**
Newfoundland and Labrador	-0.11**	(0.03)	-0.11	(0.03)	--	--	--	--	-0.08	(0.05)	-0.15	(0.05)	0.06	(0.07)
Prince Edward Island	0.00	(0.07)	0.00	(0.07)	--	--	--	--	0.12	(0.10)	-0.11	(0.11)	0.23	(0.15)
Nova Scotia	0.05	(0.04)	0.04	(0.04)	0.26	(0.10)	-0.22*	(0.11)	0.05	(0.05)	0.05	(0.05)	0.00	(0.07)
New Brunswick	0.09	(0.03)	0.12	(0.04)	0.03	(0.06)	0.09	(0.07)	0.08	(0.05)	0.10	(0.05)	-0.02	(0.07)
Quebec	0.16**	(0.02)	0.05	(0.03)	0.17	(0.02)	-0.12*	(0.04)	0.18	(0.03)	0.13	(0.03)	0.05	(0.04)
Ontario	0.11	(0.02)	0.11	(0.02)	0.13	(0.03)	-0.02	(0.04)	0.12	(0.02)	0.10	(0.03)	0.02	(0.04)
Manitoba	0.08	(0.03)	0.08	(0.03)	0.17	(0.08)	-0.09	(0.09)	0.09	(0.04)	0.07	(0.04)	0.01	(0.06)
Saskatchewan	0.05**	(0.03)	0.04	(0.03)	0.55	(0.18)	-0.51*	(0.18)	0.07	(0.03)	0.02	(0.05)	0.05	(0.06)
Alberta	0.13	(0.03)	0.13	(0.03)	0.44	(0.10)	-0.31*	(0.10)	0.16	(0.03)	0.10	(0.05)	0.06	(0.06)
British Columbia	0.11	(0.02)	0.11	(0.02)	--	--	--	--	0.15	(0.04)	0.08	(0.03)	0.07	(0.05)
OECD average	**0.00****	**(0.00)**	**--**	**--**	**--**	**--**	**--**	**--**	**0.01**	**(0.00)**	**-0.01**	**(0.00)**	**0.02***	**(0.01)**

Canada, province, or OECD average	Index of students' openness to intellect: Non-immigrant students		Immigrant students		Difference (immigrant students - non-immigrant students)		Bottom quarter of the ESCS index		Top quarter of the ESCS index		Difference (top quarter - bottom quarter)	
	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.09**	**(0.01)**	**0.18**	**(0.02)**	**0.09***	**(0.02)**	**-0.06**	**(0.02)**	**0.31**	**(0.02)**	**0.37***	**(0.03)**
Newfoundland and Labrador	-0.11	(0.03)	-0.01	(0.16)	0.09	(0.16)	-0.31	(0.07)	0.09	(0.07)	0.41*	(0.10)
Prince Edward Island	0.03	(0.07)	-0.14‡	(0.34)	-0.17	(0.35)	-0.38	(0.13)	0.14	(0.15)	0.51*	(0.21)
Nova Scotia	0.05	(0.04)	0.17	(0.12)	0.12	(0.13)	-0.10	(0.08)	0.30	(0.08)	0.40*	(0.11)
New Brunswick	0.08	(0.04)	0.27	(0.12)	0.19	(0.12)	-0.11	(0.07)	0.29	(0.07)	0.41*	(0.10)
Quebec	0.17	(0.02)	0.13	(0.04)	-0.04	(0.05)	-0.06	(0.04)	0.34	(0.04)	0.39*	(0.06)
Ontario	0.05	(0.02)	0.18	(0.03)	0.13*	(0.04)	-0.02	(0.03)	0.29	(0.04)	0.31*	(0.05)
Manitoba	0.04	(0.03)	0.22	(0.05)	0.18*	(0.06)	-0.04	(0.06)	0.17	(0.06)	0.21*	(0.08)
Saskatchewan	0.02	(0.03)	0.13	(0.05)	0.12*	(0.05)	-0.03	(0.06)	0.28	(0.05)	0.31*	(0.07)
Alberta	0.12	(0.04)	0.18	(0.05)	0.07	(0.06)	-0.07	(0.04)	0.40	(0.07)	0.47*	(0.09)
British Columbia	0.06	(0.03)	0.22	(0.04)	0.17*	(0.05)	-0.10	(0.05)	0.27	(0.05)	0.37*	(0.08)
OECD average	**0.00**	**(0.00)**	**0.05**	**(0.02)**	**0.05***	**(0.02)**	**-0.18**	**(0.01)**	**0.18**	**(0.01)**	**0.36***	**(0.01)**

SE Standard error
Av. Average
-- Not available.
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces.

Table B.2.2c

Index of students' openness to intellect and performance in creative thinking

Canada, province, or OECD average	Score in creative thinking, by quarters of the index of students' openness to intellect				Difference in creative thinking performance between students in the top quarter and students in the bottom quarter of this index		Before accounting for gender and student socioeconomic profile								After accounting for gender and student socioeconomic profile							
	Bottom quarter		Top quarter				Change in creative thinking performance per one (integer) unit change in the index of students' openness to intellect		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of students' openness to intellect		Explained variance in student relative performance (r^2 x 100)		Change in creative thinking performance per one (integer) unit change in the index of students' openness to intellect		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of students' openness to intellect		Explained variance in student relative performance (r^2 x 100)	
	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE
Canada	**36.7**	**(0.4)**	**41.3**	**(0.4)**	**4.7***	**(0.6)**	**1.5***	**(0.2)**	**1.9**	**(0.5)**	**0.6***	**(0.2)**	**32.9**	**(1.5)**	**1.1***	**(0.2)**	**8.4**	**(0.9)**	**0.5***	**(0.2)**	**34.7**	**(1.5)**
Newfoundland and Labrador	32.4	(1.7)	38.0	(1.4)	5.6*	(1.3)	2.3*	(0.5)	4.5	(2.0)	1.0*	(0.5)	39.4	(3.8)	1.8*	(0.5)	12.8	(3.2)	0.9	(0.5)	42.6	(4.0)
Prince Edward Island	34.8	(3.0)	39.9	(2.6)	5.2	(3.0)	2.1	(1.1)	4.5	(4.4)	1.4	(0.9)	37.9	(7.3)	1.5	(1.1)	10.1	(5.3)	1.1	(0.9)	39.9	(6.8)
Nova Scotia	34.1	(1.3)	38.7	(1.2)	4.6*	(1.3)	1.5*	(0.4)	1.9	(1.1)	0.4	(0.4)	37.9	(3.6)	1.0*	(0.4)	9.7	(2.9)	0.3	(0.4)	40.8	(3.5)
New Brunswick	32.7	(1.4)	37.4	(1.6)	4.7*	(1.2)	1.1*	(0.4)	1.3	(1.0)	0.3	(0.4)	35.5	(3.8)	0.8	(0.4)	11.0	(2.8)	0.2	(0.4)	38.8	(4.2)
Quebec	35.3	(0.9)	39.1	(0.7)	3.8*	(0.9)	1.2*	(0.3)	1.2	(0.6)	0.5	(0.3)	27.1	(2.5)	0.8*	(0.3)	8.5	(1.7)	0.4	(0.3)	29.4	(2.5)
Ontario	38.2	(0.6)	42.8	(0.6)	4.6*	(0.8)	1.5*	(0.3)	2.1	(0.8)	0.7*	(0.3)	33.5	(2.5)	1.2*	(0.3)	8.0	(1.3)	0.6*	(0.3)	35.1	(2.5)
Manitoba	34.1	(0.9)	39.1	(0.8)	5.0*	(1.2)	1.6*	(0.4)	2.6	(1.1)	0.7*	(0.3)	38.6	(2.7)	1.4*	(0.3)	9.9	(1.9)	0.7*	(0.3)	40.8	(2.6)
Saskatchewan	33.6	(0.6)	38.0	(0.8)	4.5*	(1.0)	1.6*	(0.4)	2.2	(1.0)	0.9*	(0.4)	39.9	(2.9)	1.3*	(0.4)	8.3	(2.0)	0.8*	(0.4)	41.5	(3.0)
Alberta	38.6	(1.0)	43.2	(1.2)	4.6*	(1.3)	1.5*	(0.5)	1.8	(1.1)	0.2	(0.5)	35.8	(3.4)	1.0	(0.5)	7.5	(2.2)	0.0	(0.5)	37.8	(3.3)
British Columbia	35.9	(1.0)	41.7	(0.9)	5.8*	(1.2)	2.0*	(0.4)	3.0	(1.2)	0.8*	(0.4)	34.3	(3.5)	1.6*	(0.4)	7.8	(2.0)	0.7	(0.4)	36.0	(3.4)
OECD average	**30.8**	**(0.1)**	**35.7**	**(0.1)**	**4.9***	**(0.1)**	**1.8***	**(0.0)**	**2.9**	**(0.1)**	**0.7***	**(0.0)**	**49.2**	**(0.4)**	**1.3***	**(0.0)**	**14.4**	**(0.3)**	**0.7***	**(0.0)**	**50.9**	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
* Significant difference within Canada, province, or OECD.
Note: "Relative performance" refers to the residual performance, attributable to purely "creative thinking" competencies, after accounting for performance in mathematics, reading, and science in a regression performed across students at the national or provincial level.

Table B.2.3a

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Students' ratings of how often they participated in creative activities that were available in their school

Canada	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Art classes/activities (e.g., painting, drawing)	50.5	(0.7)	39.7	(0.3)	18.0	(0.5)	38.4*	(0.5)	28.1	(0.5)	38.6*	(0.3)	3.3	(0.3)	34.9*	(0.8)
Creative writing classes/ activities	47.5	(0.6)	39.3	(0.3)	21.3	(0.5)	39.3	(0.4)	22.9	(0.4)	38.1*	(0.4)	8.3	(0.3)	39.2	(0.6)
Music classes/activities (e.g., chorus, band)	65.1	(0.8)	39.7	(0.2)	10.6	(0.3)	36.9*	(0.4)	19.1	(0.7)	38.7*	(0.4)	5.1	(0.4)	35.7*	(0.9)
Debate club	69.8	(0.7)	39.6	(0.2)	8.5	(0.4)	36.9*	(0.6)	7.5	(0.3)	35.1*	(0.8)	14.2	(0.5)	39.3	(0.4)
Dramatics, theatre class/ activities	68.9	(0.7)	39.7	(0.3)	10.9	(0.3)	37.7*	(0.5)	15.6	(0.4)	37.9*	(0.5)	4.6	(0.3)	35.7*	(0.7)
Publications (e.g., newspaper, yearbooks, literary magazine)	73.9	(0.6)	39.7	(0.2)	9.6	(0.3)	37.9*	(0.5)	8.0	(0.3)	35.5*	(0.7)	8.5	(0.4)	37.9*	(0.6)
Science club	70.8	(0.6)	39.6	(0.2)	8.0	(0.3)	37.3*	(0.6)	8.6	(0.3)	35.7*	(0.6)	12.6	(0.4)	39.1	(0.5)
Computer programming classes/activities	62.6	(0.6)	39.5	(0.2)	9.6	(0.3)	38.0*	(0.4)	14.7	(0.5)	38.3*	(0.5)	13.1	(0.5)	34.7*	(0.4)

SE Standard error
Av. Average
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3aa

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Art classes/activities (e.g., painting, drawing)

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**50.5**	**(0.7)**	**39.7**	**(0.3)**	**18.0**	**(0.5)**	**38.4***	**(0.5)**	**28.1**	**(0.5)**	**38.6***	**(0.3)**	**3.3**	**(0.3)**	**34.9***	**(0.8)**
Newfoundland and Labrador	52.3	(1.9)	35.8	(1.6)	17.3	(1.5)	35.0	(1.9)	24.0	(2.0)	33.5*	(1.3)	6.4	(0.8)	33.0	(2.1)
Prince Edward Island	69.1	(2.8)	37.1	(2.7)	11.0	(2.2)	34.4	(2.6)	17.7	(2.6)	38.2	(2.4)	U‡	(0.7)	33.8	(4.9)
Nova Scotia	39.7	(1.5)	37.4	(1.1)	15.4	(1.2)	36.7	(1.5)	40.9	(1.9)	36.5	(1.2)	4.0	(0.7)	36.1	(2.8)
New Brunswick	54.1	(1.4)	35.5	(1.4)	16.9	(1.2)	37.0	(1.4)	25.7	(1.6)	35.1	(1.4)	3.4	(0.5)	28.0*	(2.0)
Quebec	42.3	(1.4)	37.6	(0.6)	13.7	(0.9)	36.7	(1.0)	38.7	(1.2)	37.6	(0.6)	5.3	(0.9)	35.1	(1.4)
Ontario	52.7	(1.1)	41.1	(0.4)	20.0	(1.0)	39.5	(0.8)	24.2	(0.8)	40.4	(0.6)	3.1	(0.3)	36.6*	(1.4)
Manitoba	51.8	(1.4)	36.7	(0.7)	15.4	(1.1)	35.0	(1.1)	29.4	(1.2)	36.6	(0.9)	3.5	(0.6)	35.4	(1.9)
Saskatchewan	47.9	(1.1)	36.9	(0.5)	19.6	(1.0)	35.1	(0.9)	28.2	(1.3)	35.8	(0.9)	4.3	(0.7)	34.1	(1.9)
Alberta	55.7	(2.0)	41.6	(0.8)	18.7	(1.4)	38.9*	(1.4)	23.9	(1.7)	39.7	(1.2)	1.7‡	(0.5)	33.8*	(3.5)
British Columbia	52.9	(1.8)	39.2	(0.7)	20.3	(0.9)	39.1	(1.1)	24.7	(1.5)	38.5	(1.1)	2.2	(0.3)	31.1*	(2.3)
OECD average	**46.2**	**(0.2)**	**33.7**	**(0.1)**	**14.6**	**(0.1)**	**31.6***	**(0.1)**	**26.1**	**(0.2)**	**32.6***	**(0.1)**	**13.1**	**(0.1)**	**34.3***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ab

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Creative writing classes/activities

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**47.5**	**(0.6)**	**39.3**	**(0.3)**	**21.3**	**(0.5)**	**39.3**	**(0.4)**	**22.9**	**(0.4)**	**38.1***	**(0.4)**	**8.3**	**(0.3)**	**39.2**	**(0.6)**
Newfoundland and Labrador	46.3	(2.2)	36.2	(1.6)	20.9	(1.5)	35.2	(1.7)	25.7	(1.9)	32.9*	(1.4)	7.1	(1.0)	34.3	(1.9)
Prince Edward Island	61.6	(2.9)	37.2	(2.5)	16.9	(2.8)	36.4	(2.2)	19.6	(2.4)	36.9	(3.2)	U‡	(0.9)	39.8	(4.4)
Nova Scotia	40.5	(1.5)	36.7	(1.1)	23.1	(1.8)	38.3	(1.4)	29.9	(1.9)	35.7	(1.3)	6.5	(0.8)	39.0	(1.8)
New Brunswick	53.2	(1.5)	35.6	(1.3)	16.5	(1.2)	36.2	(1.6)	24.4	(1.4)	34.7	(1.5)	5.9	(0.7)	34.1	(1.8)
Quebec	47.9	(1.3)	37.3	(0.7)	20.3	(0.9)	37.5	(0.8)	12.9	(0.8)	35.8	(1.0)	18.9	(1.0)	38.7*	(0.8)
Ontario	51.0	(1.1)	40.8	(0.5)	20.8	(0.7)	40.7	(0.6)	22.4	(0.8)	39.2*	(0.6)	5.8	(0.4)	40.8	(1.0)
Manitoba	42.3	(1.4)	36.2	(0.8)	19.8	(1.0)	36.5	(0.8)	31.7	(1.3)	36.5	(0.9)	6.2	(0.9)	37.9	(1.3)
Saskatchewan	44.1	(1.3)	36.2	(0.6)	20.7	(1.1)	35.5	(0.9)	28.6	(1.2)	36.3	(0.9)	6.6	(0.8)	36.8	(1.5)
Alberta	49.7	(2.3)	41.3	(0.8)	23.3	(2.0)	40.7	(1.1)	21.7	(1.2)	38.6*	(1.3)	5.3	(0.8)	42.5	(1.8)
British Columbia	37.5	(1.4)	38.6	(0.9)	23.0	(1.1)	39.7	(0.9)	36.0	(1.4)	39.1	(0.9)	3.4	(0.5)	35.5	(1.9)
OECD average	**45.3**	**(0.2)**	**33.7**	**(0.1)**	**21.0**	**(0.1)**	**32.4 ***	**(0.1)**	**15.9**	**(0.1)**	**30.5***	**(0.1)**	**17.8**	**(0.1)**	**36.0***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ac

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Music classes/activities (e.g., chorus, band)

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**65.1**	**(0.8)**	**39.7**	**(0.2)**	**10.6**	**(0.3)**	**36.9***	**(0.4)**	**19.1**	**(0.7)**	**38.7***	**(0.4)**	**5.1**	**(0.4)**	**35.7***	**(0.9)**
Newfoundland and Labrador	58.8	(1.8)	35.9	(1.6)	10.4	(1.4)	31.7	(2.5)	24.0	(1.8)	34.7	(1.3)	6.7	(1.8)	33.1	(2.2)
Prince Edward Island	71.7	(3.2)	37.1	(2.7)	8.5‡	(2.0)	33.5	(2.8)	17.8	(2.7)	39.0	(2.3)	2.0‡	(0.6)	35.1	(5.4)
Nova Scotia	68.3	(1.8)	37.6	(1.0)	9.0	(1.0)	33.8*	(1.7)	16.8	(1.3)	35.9	(1.7)	5.9	(0.9)	35.7	(2.4)
New Brunswick	61.3	(1.8)	35.9	(1.4)	14.1	(1.1)	34.7	(1.6)	21.5	(1.5)	35.1	(1.4)	3.1	(0.5)	31.4	(2.3)
Quebec	61.7	(1.7)	38.1	(0.7)	7.5	(0.5)	35.6	(1.4)	19.5	(1.6)	36.4	(0.9)	11.4	(1.3)	36.8	(1.0)
Ontario	66.0	(1.1)	41.0	(0.4)	13.1	(0.7)	38.9*	(0.7)	18.4	(0.9)	40.3	(0.6)	2.5	(0.4)	35.1*	(1.7)
Manitoba	60.0	(1.5)	36.8	(0.8)	9.3	(0.8)	33.3*	(1.2)	26.5	(1.3)	36.7	(0.8)	4.3	(0.9)	35.4	(2.0)
Saskatchewan	60.2	(1.2)	36.5	(0.6)	12.1	(0.8)	34.3	(1.0)	20.5	(1.2)	36.8	(1.1)	7.3	(0.9)	34.6	(1.5)
Alberta	71.9	(2.0)	41.5	(0.7)	9.5	(1.1)	35.7*	(1.8)	14.7	(1.6)	40.6	(1.4)	U	(1.6)	35.3	(3.9)
British Columbia	64.2	(1.8)	39.3	(0.7)	10.4	(0.8)	36.7*	(1.2)	22.4	(1.8)	39.4	(1.0)	3.1	(0.6)	33.4*	(2.2)
OECD average	**53.1**	**(0.2)**	**34.2**	**(0.1)**	**13.0**	**(0.1)**	**30.4***	**(0.1)**	**20.6**	**(0.2)**	**32.0***	**(0.1)**	**13.3**	**(0.1)**	**34.1**	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ad

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Debate club

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**69.8**	**(0.7)**	**39.6**	**(0.2)**	**8.5**	**(0.4)**	**36.9***	**(0.6)**	**7.5**	**(0.3)**	**35.1***	**(0.8)**	**14.2**	**(0.5)**	**39.3**	**(0.4)**
Newfoundland and Labrador	64.2	(1.8)	35.6	(1.6)	4.6	(0.8)	28.9*	(3.1)	6.2	(0.8)	27.6*	(1.9)	25.0	(1.8)	36.2	(1.5)
Prince Edward Island	78.3	(2.3)	37.5	(2.6)	6.5‡	(1.8)	30.6*	(2.7)	4.8‡	(1.4)	32.0	(4.2)	10.4	(1.3)	39.7	(2.8)
Nova Scotia	70.9	(1.9)	37.4	(1.1)	6.0	(0.9)	34.9	(2.1)	8.3	(1.2)	31.4*	(2.2)	14.8	(1.1)	38.3	(1.4)
New Brunswick	73.5	(1.3)	36.4	(1.4)	7.0	(0.8)	31.3*	(1.8)	9.9	(1.0)	31.9*	(1.7)	9.6	(0.8)	34.8	(1.6)
Quebec	60.0	(1.4)	37.6	(0.7)	9.2	(0.6)	36.6	(1.1)	5.9	(0.5)	31.3*	(1.4)	24.9	(1.2)	38.7	(0.7)
Ontario	73.5	(0.9)	41.1	(0.4)	8.3	(0.6)	37.7*	(1.0)	8.9	(0.6)	38.1*	(1.0)	9.3	(0.6)	40.6	(0.9)
Manitoba	71.0	(1.2)	36.9	(0.7)	9.6	(0.8)	34.5	(1.3)	7.3	(0.8)	32.1*	(1.6)	12.1	(0.9)	38.2	(0.9)
Saskatchewan	68.3	(1.3)	36.5	(0.6)	7.3	(0.7)	33.0*	(1.3)	8.1	(0.8)	32.1*	(1.9)	16.3	(1.2)	38.0	(1.0)
Alberta	72.8	(2.2)	41.4	(0.7)	8.7	(1.1)	37.3*	(1.9)	6.5	(0.9)	34.4*	(2.1)	11.9	(1.8)	40.6	(1.7)
British Columbia	72.2	(1.8)	39.4	(0.7)	8.8	(1.0)	37.7	(1.3)	7.3	(0.7)	35.3*	(1.9)	11.8	(1.6)	39.3	(1.1)
OECD average	**56.0**	**(0.2)**	**34.0**	**(0.1)**	**12.8**	**(0.1)**	**31.0***	**(0.1)**	**9.7**	**(0.1)**	**28.4***	**(0.2)**	**21.5**	**(0.1)**	**35.8***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ae

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Dramatics, theatre class/activities

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**68.9**	**(0.7)**	**39.7**	**(0.3)**	**10.9**	**(0.3)**	**37.7***	**(0.5)**	**15.6**	**(0.4)**	**37.9***	**(0.5)**	**4.6**	**(0.3)**	**35.7***	**(0.7)**
Newfoundland and Labrador	67.7	(2.0)	36.1	(1.6)	8.1	(1.2)	32.2	(2.2)	12.0	(1.4)	32.1*	(1.5)	12.2	(2.3)	33.3	(1.7)
Prince Edward Island	75.5	(2.9)	37.5	(2.7)	6.2‡	(1.7)	30.5	(3.6)	11.4‡	(2.2)	36.6	(3.6)	7.0	(0.9)	39.6	(2.4)
Nova Scotia	63.8	(2.0)	36.9	(1.1)	9.2	(1.1)	38.4	(1.9)	22.2	(1.7)	36.6	(1.5)	4.8	(0.6)	35.7	(2.3)
New Brunswick	74.2	(1.3)	36.3	(1.3)	8.5	(1.0)	34.0	(1.6)	13.0	(1.2)	33.0*	(1.5)	4.3	(0.6)	30.9*	(2.1)
Quebec	63.8	(1.6)	37.8	(0.7)	8.3	(0.7)	36.4	(1.4)	19.0	(1.2)	37.1	(0.8)	8.9	(0.9)	36.3	(1.0)
Ontario	70.8	(1.1)	41.2	(0.4)	12.0	(0.6)	38.9*	(0.7)	14.1	(0.7)	39.1*	(0.8)	3.0	(0.4)	36.1*	(1.5)
Manitoba	67.1	(1.4)	36.9	(0.7)	9.7	(0.8)	34.7	(1.5)	18.8	(1.4)	36.3	(1.0)	4.4	(1.4)	33.3	(2.3)
Saskatchewan	66.2	(1.4)	36.7	(0.6)	12.7	(1.0)	34.2	(1.2)	15.1	(1.2)	35.4	(1.3)	6.0	(0.9)	35.2	(1.7)
Alberta	72.6	(2.0)	41.6	(0.8)	12.1	(1.3)	37.8*	(1.5)	13.3	(1.2)	38.4*	(1.5)	2.1	(0.6)	38.0	(3.6)
British Columbia	69.0	(1.7)	39.4	(0.7)	11.6	(1.0)	38.6	(1.1)	15.7	(1.1)	38.5	(1.2)	3.7	(0.7)	34.3*	(2.0)
OECD average	**59.8**	**(0.2)**	**34.4**	**(0.1)**	**11.1**	**(0.1)**	**30.2***	**(0.1)**	**10.8**	**(0.1)**	**29.6***	**(0.2)**	**18.2**	**(0.2)**	**35.0***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3af

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Publications (e.g., newspaper, yearbooks, literary magazine)

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**73.9**	**(0.6)**	**39.7**	**(0.2)**	**9.6**	**(0.3)**	**37.9***	**(0.5)**	**8.0**	**(0.3)**	**35.5***	**(0.7)**	**8.5**	**(0.4)**	**37.9***	**(0.6)**
Newfoundland and Labrador	67.8	(2.0)	35.9	(1.6)	7.2	(1.1)	32.8	(2.5)	5.2	(0.7)	28.9*	(2.0)	19.9	(1.9)	34.3	(1.4)
Prince Edward Island	78.3	(3.0)	37.6	(2.6)	8.0‡	(2.1)	34.8	(3.0)	7.4‡	(1.6)	32.2	(3.0)	6.3	(1.2)	38.2	(3.8)
Nova Scotia	75.2	(1.9)	37.4	(1.1)	7.3	(1.0)	36.6	(2.1)	9.5	(1.3)	32.6*	(2.1)	8.1	(0.9)	37.7	(1.8)
New Brunswick	75.0	(1.2)	36.2	(1.4)	7.7	(0.7)	34.8	(1.4)	11.5	(1.0)	32.2*	(1.8)	5.8	(0.7)	32.1*	(1.9)
Quebec	72.0	(1.2)	38.1	(0.7)	8.0	(0.5)	36.8	(1.2)	5.9	(0.6)	30.9*	(1.2)	14.2	(1.2)	37.2	(0.8)
Ontario	74.2	(1.0)	41.0	(0.4)	11.4	(0.6)	39.1*	(0.8)	8.7	(0.6)	38.3*	(0.9)	5.7	(0.5)	39.5	(1.1)
Manitoba	74.0	(1.4)	37.0	(0.7)	9.2	(0.9)	35.0	(1.3)	9.6	(0.9)	33.3*	(1.5)	7.2	(0.7)	36.6	(1.1)
Saskatchewan	70.6	(1.5)	36.8	(0.6)	9.6	(0.8)	33.8*	(1.2)	10.1	(0.9)	33.2*	(1.4)	9.7	(1.0)	37.0	(1.3)
Alberta	75.2	(1.7)	41.3	(0.7)	9.0	(1.0)	37.7*	(1.9)	7.5	(1.0)	36.2*	(2.1)	8.3	(1.1)	40.0	(1.7)
British Columbia	76.1	(1.4)	39.5	(0.7)	9.5	(0.8)	38.8	(1.3)	8.5	(0.8)	35.4*	(1.6)	5.9	(0.7)	36.8	(1.8)
OECD average	**59.8**	**(0.2)**	**34.3**	**(0.1)**	**11.9**	**(0.1)**	**31.2***	**(0.1)**	**8.5**	**(0.1)**	**27.5***	**(0.2)**	**19.7**	**(0.1)**	**35.2***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ag

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Science club

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**70.8**	**(0.6)**	**39.6**	**(0.2)**	**8.0**	**(0.3)**	**37.3***	**(0.6)**	**8.6**	**(0.3)**	**35.7***	**(0.6)**	**12.6**	**(0.4)**	**39.1**	**(0.5)**
Newfoundland and Labrador	66.4	(2.0)	35.8	(1.6)	5.8	(1.0)	30.4*	(2.9)	6.0	(0.7)	28.1*	(1.8)	21.7	(1.8)	35.9	(1.3)
Prince Edward Island	77.8	(2.4)	37.5	(2.6)	8.1‡	(1.9)	31.8	(3.4)	5.9‡	(1.1)	34.7	(3.5)	8.2	(1.4)	39.5	(3.3)
Nova Scotia	72.3	(1.8)	37.3	(1.1)	4.5	(0.7)	35.3	(2.5)	8.1	(1.2)	31.8*	(2.3)	15.2	(1.3)	38.5	(1.6)
New Brunswick	75.1	(1.2)	36.2	(1.4)	6.3	(0.7)	32.0*	(1.7)	10.2	(1.1)	31.4*	(1.6)	8.3	(0.7)	35.2	(1.6)
Quebec	68.1	(1.4)	38.0	(0.7)	5.7	(0.5)	35.3	(1.4)	6.9	(0.6)	31.7*	(1.2)	19.3	(1.1)	38.0	(0.8)
Ontario	71.2	(0.9)	40.9	(0.4)	9.7	(0.5)	38.7*	(0.9)	9.7	(0.5)	38.9*	(0.8)	9.4	(0.6)	40.7	(0.9)
Manitoba	71.9	(1.4)	37.0	(0.7)	7.5	(0.8)	33.8*	(1.2)	9.3	(0.9)	32.0*	(1.5)	11.3	(1.0)	38.1	(1.0)
Saskatchewan	67.2	(1.3)	36.6	(0.6)	7.7	(0.6)	33.3*	(1.3)	9.1	(0.8)	31.4*	(1.5)	16.0	(1.1)	38.0	(0.9)
Alberta	72.9	(2.1)	41.4	(0.7)	8.6	(1.0)	37.5*	(1.7)	7.1	(0.9)	35.6*	(1.8)	11.4	(1.8)	40.5	(1.9)
British Columbia	71.9	(1.5)	39.4	(0.7)	7.8	(0.7)	38.6	(1.3)	9.8	(0.9)	36.1*	(1.5)	10.5	(1.2)	39.0	(1.2)
OECD average	**58.1**	**(0.2)**	**34.2**	**(0.1)**	**10.6**	**(0.1)**	**30.1***	**(0.1)**	**10.9**	**(0.1)**	**29.0***	**(0.1)**	**20.4**	**(0.1)**	**35.3***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3ah

Percentage and average scores of students by student participation in creative activities at school: CREATIVE THINKING

Computer programming classes/activities

Canada, province, or OECD average	Never or almost never				From about once or twice a year to about once or twice a month				From about once or twice a week to every day				Not available at school			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**62.6**	**(0.6)**	**39.5**	**(0.2)**	**9.6**	**(0.3)**	**38.0***	**(0.4)**	**14.7**	**(0.5)**	**38.3***	**(0.5)**	**13.1**	**(0.5)**	**34.7***	**(0.4)**
Newfoundland and Labrador	58.4	(2.3)	35.9	(1.6)	7.5	(1.1)	32.0*	(2.6)	18.9	(2.2)	33.9	(1.7)	15.1	(1.8)	32.0*	(1.5)
Prince Edward Island	72.3	(3.0)	37.5	(2.5)	7.2‡	(1.9)	34.4	(4.0)	8.9‡	(2.0)	35.1	(3.2)	11.6	(2.5)	32.4	(2.3)
Nova Scotia	68.1	(1.8)	37.9	(1.1)	5.7	(0.8)	31.3*	(2.0)	11.1	(1.0)	32.9*	(1.5)	15.0	(1.2)	33.4*	(1.3)
New Brunswick	66.7	(1.2)	36.1	(1.4)	9.4	(0.9)	35.4	(1.5)	14.4	(1.0)	33.3	(1.6)	9.5	(0.7)	30.9*	(1.2)
Quebec	65.2	(1.4)	37.9	(0.7)	6.0	(0.5)	37.5	(1.3)	8.9	(0.7)	33.5*	(1.3)	19.9	(1.2)	36.0*	(0.8)
Ontario	60.2	(1.1)	40.8	(0.4)	11.2	(0.5)	39.4*	(0.7)	16.8	(0.9)	40.4	(0.7)	11.8	(1.0)	34.1*	(0.8)
Manitoba	59.3	(1.2)	36.6	(0.7)	10.6	(0.7)	35.2	(1.1)	18.4	(0.9)	36.5	(0.8)	11.7	(0.9)	34.0*	(1.0)
Saskatchewan	63.0	(1.5)	37.0	(0.5)	8.8	(0.7)	33.9*	(1.3)	14.3	(1.2)	34.0*	(1.2)	14.0	(1.0)	33.0*	(1.1)
Alberta	62.9	(2.2)	41.1	(0.9)	10.3	(1.2)	37.8*	(1.4)	16.7	(1.7)	40.0	(1.3)	10.0	(1.1)	35.6*	(1.6)
British Columbia	63.5	(1.5)	39.6	(0.7)	11.4	(0.8)	37.5*	(1.2)	15.7	(1.0)	38.0	(1.2)	9.4	(1.1)	34.0*	(1.3)
OECD average	**53.3**	**(0.2)**	**34.3**	**(0.1)**	**11.8**	**(0.1)**	**30.8***	**(0.1)**	**16.5**	**(0.1)**	**31.3***	**(0.1)**	**18.4**	**(0.1)**	**32.8***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Never or almost never" category.

Table B.2.3b

Index of student participation in creative activities at school by sociodemographic characteristics

Canada, province, or OECD average	Index of student participation in creative activities at school													
	All students		Anglophone school systems		Francophone school systems		Difference (A - F)		Girls		Boys		Difference (G - B)	
	Score	SE	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.02**	**(0.01)**	**0.03**	**(0.01)**	**-0.02**	**(0.03)**	**0.05**	**(0.03)**	**0.05**	**(0.02)**	**-0.01**	**(0.02)**	**0.06***	**(0.02)**
Newfoundland and Labrador	0.06	(0.04)	0.06	(0.04)	--	--	--	--	0.08	(0.05)	0.04	(0.06)	0.04	(0.09)
Prince Edward Island	-0.27**	(0.06)	-0.27	(0.06)	--	--	--	--	-0.09	(0.08)	-0.45	(0.08)	0.35*	(0.11)
Nova Scotia	0.14**	(0.04)	0.15	(0.04)	-0.02	(0.11)	0.17	(0.11)	0.17	(0.05)	0.12	(0.06)	0.04	(0.07)
New Brunswick	-0.05**	(0.03)	0.05	(0.04)	-0.28	(0.06)	0.32*	(0.08)	0.00	(0.05)	-0.09	(0.06)	0.09	(0.08)
Quebec	0.00	(0.03)	0.18	(0.03)	-0.02	(0.03)	0.20*	(0.04)	-0.01	(0.03)	0.01	(0.03)	-0.02	(0.04)
Ontario	0.02	(0.02)	0.02	(0.02)	0.06	(0.03)	-0.04	(0.04)	0.03	(0.02)	0.00	(0.03)	0.03	(0.04)
Manitoba	0.12**	(0.03)	0.12	(0.03)	0.24	(0.08)	-0.12	(0.09)	0.16	(0.03)	0.09	(0.04)	0.07	(0.05)
Saskatchewan	0.04	(0.03)	0.04	(0.03)	0.20	(0.15)	-0.16	(0.16)	0.10	(0.04)	-0.02	(0.04)	0.12*	(0.06)
Alberta	-0.04	(0.04)	-0.04	(0.04)	0.21	(0.10)	-0.25*	(0.12)	0.03	(0.05)	-0.12	(0.06)	0.15*	(0.07)
British Columbia	0.08	(0.03)	0.08	(0.03)	--	--	--	--	0.16	(0.04)	0.00	(0.05)	0.16*	(0.06)
OECD average	**-0.02****	**(0.00)**	**--**	**--**	**--**	**--**	**--**	**--**	**-0.06**	**(0.00)**	**0.01**	**(0.01)**	**-0.07***	**(0.01)**

Canada, province, or OECD average	Index of student participation in creative activities at school											
	Non-immigrant students		Immigrant students		Difference (immigrant students - non-immigrant students)		Bottom quarter of the ESCS index		Top quarter of the ESCS index		Difference (top quarter - bottom quarter)	
	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**-0.02**	**(0.01)**	**0.06**	**(0.02)**	**0.08***	**(0.02)**	**-0.03**	**(0.02)**	**0.07**	**(0.02)**	**0.10***	**(0.03)**
Newfoundland and Labrador	0.04	(0.04)	0.14	(0.15)	0.11	(0.15)	0.22	(0.09)	-0.21	(0.05)	-0.44*	(0.11)
Prince Edward Island	-0.31	(0.06)	-0.10‡	(0.14)	0.20	(0.15)	-0.46	(0.12)	-0.13	(0.11)	0.33*	(0.16)
Nova Scotia	0.14	(0.04)	0.24	(0.14)	0.11	(0.14)	0.03	(0.06)	0.16	(0.08)	0.12	(0.10)
New Brunswick	-0.08	(0.03)	0.27	(0.15)	0.35*	(0.16)	0.03	(0.10)	-0.13	(0.06)	-0.16	(0.13)
Quebec	-0.01	(0.03)	0.00	(0.04)	0.01	(0.05)	0.04	(0.04)	-0.01	(0.04)	-0.05	(0.05)
Ontario	-0.04	(0.03)	0.08	(0.03)	0.12*	(0.03)	-0.07	(0.03)	0.11	(0.04)	0.18*	(0.06)
Manitoba	0.10	(0.03)	0.16	(0.05)	0.06	(0.06)	0.05	(0.05)	0.18	(0.04)	0.13*	(0.06)
Saskatchewan	0.01	(0.04)	0.12	(0.06)	0.11	(0.07)	-0.05	(0.05)	0.11	(0.05)	0.16*	(0.07)
Alberta	-0.08	(0.04)	-0.02	(0.06)	0.06	(0.07)	-0.05	(0.07)	0.02	(0.08)	0.08	(0.10)
British Columbia	0.03	(0.04)	0.15	(0.04)	0.12*	(0.05)	-0.02	(0.06)	0.13	(0.05)	0.15*	(0.07)
OECD average	**-0.04**	**(0.00)**	**0.11**	**(0.02)**	**0.15***	**(0.02)**	**-0.01**	**(0.01)**	**-0.04**	**(0.01)**	**-0.03***	**(0.01)**

SE Standard error
Av. Average
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces.

Table B.2.3c

Index of student participation in creative activities at school and performance in creative thinking

Canada, province, or OECD average	Score in creative thinking, by quarters of the index of student participation in creative activities at school				Difference in creative thinking performance between students in the top quarter and students in the bottom quarter of this index		Before accounting for gender and student socioeconomic profile								After accounting for gender and student socioeconomic profile							
	Bottom quarter		Top quarter				Change in creative thinking performance per one (integer) unit change in the index of student participation in creative activities at school		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of student participation in creative activities at school		Explained variance in student relative performance (r^2 x 100)		Change in creative thinking performance per one (integer) unit change in the index of student participation in creative activities at school		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of students' participation in creative activities at school		Explained variance in student relative performance (r^2 x 100)	
	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE
Canada	**38.2**	**(0.3)**	**37.5**	**(0.4)**	**-0.7**	**(0.5)**	-0.5*	**(0.2)**	**0.2**	**(0.2)**	**0.1**	**(0.2)**	**32.6**	**(1.5)**	**-0.7***	**(0.2)**	**7.7**	**(1.0)**	**0.0**	**(0.2)**	**34.5**	**(1.5)**
Newfoundland and Labrador	35.1	(1.8)	32.4	(1.4)	-2.7	(1.7)	-1.4*	(0.6)	1.9	(1.5)	-0.2	(0.6)	39.7	(4.2)	-1.0	(0.5)	11.1	(3.5)	-0.1	(0.5)	42.7	(4.3)
Prince Edward Island	36.9	(3.0)	35.8	(2.2)	-1.1	(2.8)	0.0	(1.0)	0.2	(0.9)	0.8	(1.0)	35.3	(7.2)	-0.6	(1.0)	7.5	(4.4)	0.3	(1.0)	37.9	(7.0)
Nova Scotia	35.6	(1.2)	36.1	(1.4)	0.5	(1.4)	-0.5	(0.6)	0.3	(0.6)	0.4	(0.5)	39.0	(3.9)	-0.6	(0.6)	8.9	(2.4)	0.2	(0.5)	41.8	(3.6)
New Brunswick	34.3	(1.4)	33.8	(1.2)	-0.5	(1.3)	-0.6	(0.4)	0.4	(0.6)	0.4	(0.4)	34.8	(3.9)	-0.5	(0.4)	9.4	(2.6)	0.4	(0.4)	37.7	(4.2)
Quebec	36.1	(0.9)	35.8	(0.9)	-0.3	(1.3)	-0.7	(0.5)	0.4	(0.4)	0.1	(0.4)	26.9	(2.6)	-0.6	(0.5)	8.5	(1.7)	0.1	(0.4)	29.4	(2.6)
Ontario	39.5	(0.5)	38.9	(0.6)	-0.6	(0.7)	-0.3	(0.2)	0.1	(0.2)	0.2	(0.2)	33.1	(2.5)	-0.6*	(0.3)	7.1	(1.3)	0.1	(0.2)	35.2	(2.4)
Manitoba	34.3	(0.9)	35.4	(0.8)	1.1	(1.1)	-0.2	(0.4)	0.1	(0.2)	0.2	(0.4)	38.1	(3.0)	-0.4	(0.4)	7.6	(1.5)	0.0	(0.4)	40.3	(2.9)
Saskatchewan	35.3	(0.6)	35.0	(1.0)	-0.2	(1.1)	-0.5	(0.5)	0.4	(0.6)	0.1	(0.4)	38.7	(3.0)	-0.7	(0.5)	7.8	(1.9)	-0.1	(0.4)	40.4	(3.0)
Alberta	40.7	(0.9)	38.4	(1.2)	-2.3	(1.3)	-1.2*	(0.4)	1.1	(0.8)	-0.1	(0.3)	35.8	(3.4)	-1.3*	(0.4)	7.7	(2.4)	-0.2	(0.4)	37.5	(3.3)
British Columbia	37.6	(1.0)	38.1	(1.0)	0.5	(1.1)	-0.1	(0.4)	0.0	(0.1)	0.3	(0.3)	33.3	(3.4)	-0.3	(0.3)	6.0	(1.8)	0.1	(0.3)	35.0	(3.4)
OECD average	**33.0**	**(0.1)**	**30.2**	**(0.1)**	**-2.8***	**(0.1)**	**-1.3***	**(0.1)**	**1.9**	**(0.1)**	**0.1***	**(0.0)**	**49.0**	**(0.4)**	**-1.2***	**(0.0)**	**14.8**	**(0.3)**	**0.1***	**(0.0)**	**50.8**	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
* Significant difference within Canada, province, or OECD.
Note: "Relative performance" refers to the residual performance, attributable to purely "creative thinking" competencies, after accounting for performance in mathematics, reading, and science in a regression performed across students at the national or provincial level.

Table B.2.4a

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

Students' ratings of their agreement with statements about the degree to which creative thinking is fostered and supported in their school and class environment

Canada	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
My teachers give me enough time to come up with creative solutions on assignments.	5.3	(0.2)	35.6*	(0.7)	23.4	(0.5)	39.3	(0.4)	59.2	(0.5)	39.3	(0.3)	12.1	(0.4)	38.5	(0.6)
My teachers value students' creativity.	5.2	(0.3)	35.7*	(0.8)	19.7	(0.5)	38.7	(0.4)	59.8	(0.6)	39.1	(0.3)	15.3	(0.4)	39.7	(0.5)
The activities we do in my classes help me think about new ways to solve problems.	5.8	(0.2)	36.3*	(0.7)	25.9	(0.5)	39.2	(0.3)	56.4	(0.6)	39.4	(0.3)	11.9	(0.5)	39.1	(0.6)
My mathematics assignments require me to come up with different solutions for a problem.	6.4	(0.2)	37.7	(0.7)	26.2	(0.5)	39.6	(0.4)	55.5	(0.6)	38.9	(0.3)	11.9	(0.4)	39.1	(0.6)
My teachers encourage me to come up with original answers.	5.6	(0.2)	36.0*	(0.6)	19.7	(0.5)	38.6	(0.4)	58.2	(0.6)	39.4	(0.2)	16.5	(0.4)	40.1	(0.6)
At school, I am given a chance to express my ideas.	5.0	(0.2)	35.8*	(0.6)	18.0	(0.5)	38.3*	(0.4)	60.8	(0.7)	39.4	(0.3)	16.2	(0.5)	39.7	(0.6)

SE Standard error
Av. Average
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4aa

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

My teachers give me enough time to come up with creative solutions on assignments.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.3**	**(0.2)**	**35.6***	**(0.7)**	**23.4**	**(0.5)**	**39.3**	**(0.4)**	**59.2**	**(0.5)**	**39.3**	**(0.3)**	**12.1**	**(0.4)**	**38.5**	**(0.6)**
Newfoundland and Labrador	6.1	(0.9)	30.9*	(2.3)	24.7	(2.1)	34.3	(1.8)	58.7	(2.1)	35.6	(1.5)	10.5	(1.1)	37.1	(1.6)
Prince Edward Island	8.4‡	(2.4)	30.4	(4.4)	26.1	(3.4)	37.3	(3.1)	55.3	(3.6)	37.1	(2.5)	10.2‡	(1.9)	39.8	(3.4)
Nova Scotia	6.3	(1.0)	32.4*	(2.0)	26.7	(1.7)	38.6	(1.3)	58.2	(2.0)	37.2	(1.1)	8.8	(1.0)	34.8	(2.0)
New Brunswick	5.3	(0.8)	31.5*	(2.1)	26.4	(1.7)	35.6	(1.3)	55.8	(1.6)	36.1	(1.3)	12.5	(1.2)	34.8	(1.8)
Quebec	5.9	(0.5)	34.1*	(1.5)	25.4	(1.0)	38.2	(0.9)	54.3	(1.2)	37.6	(0.7)	14.5	(0.7)	35.8	(1.3)
Ontario	5.1	(0.4)	36.7*	(1.3)	22.9	(0.9)	41.0	(0.6)	59.7	(1.0)	40.6	(0.5)	12.3	(0.7)	40.6	(0.8)
Manitoba	4.6	(0.6)	32.5	(2.4)	21.3	(1.1)	36.9	(0.9)	62.1	(1.2)	36.8	(0.8)	12.0	(1.0)	36.1	(1.3)
Saskatchewan	4.7	(0.6)	31.7*	(1.9)	20.3	(1.1)	35.7	(0.9)	63.0	(1.3)	36.5	(0.7)	12.0	(1.0)	36.4	(1.2)
Alberta	5.4	(0.8)	39.7	(2.1)	20.4	(1.6)	40.1	(1.1)	64.0	(1.7)	40.8	(0.7)	10.2	(1.1)	40.8	(1.7)
British Columbia	4.4	(0.4)	34.5*	(1.9)	25.2	(1.6)	38.9	(0.9)	59.9	(1.6)	39.0	(0.9)	10.5	(0.8)	38.8	(1.3)
OECD average	**8.0**	**(0.1)**	**29.9***	**(0.2)**	**29.2**	**(0.2)**	**34.7***	**(0.1)**	**54.7**	**(0.2)**	**33.7**	**(0.1)**	**8.1**	**(0.1)**	**32.1***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4ab

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

My teachers value students' creativity.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.2**	**(0.3)**	**35.7***	**(0.8)**	**19.7**	**(0.5)**	**38.7**	**(0.4)**	**59.8**	**(0.6)**	**39.1**	**(0.3)**	**15.3**	**(0.4)**	**39.7**	**(0.5)**
Newfoundland and Labrador	5.3	(1.0)	32.9	(2.6)	17.2	(1.5)	33.0	(2.0)	63.8	(1.9)	35.1	(1.5)	13.7	(1.2)	36.8	(2.0)
Prince Edward Island	5.7‡	(1.9)	27.1*	(4.8)	22.3	(3.6)	37.0	(3.2)	54.6	(3.9)	37.5	(2.5)	17.4	(3.2)	38.3	(3.0)
Nova Scotia	6.2	(1.1)	33.4*	(2.3)	19.0	(1.6)	37.3	(1.6)	61.5	(2.2)	37.5	(1.1)	13.3	(1.4)	35.0	(1.7)
New Brunswick	7.0	(0.9)	34.0	(1.7)	21.2	(1.4)	35.2	(1.3)	58.5	(1.7)	35.6	(1.4)	13.3	(1.3)	35.7	(1.8)
Quebec	7.9	(0.6)	35.5	(1.5)	28.7	(1.0)	38.1	(0.8)	50.0	(1.1)	37.4	(0.7)	13.4	(0.7)	36.0	(1.3)
Ontario	4.6	(0.5)	36.7*	(1.3)	17.8	(0.9)	40.4	(0.7)	61.9	(1.1)	40.6	(0.4)	15.7	(0.7)	41.5	(0.7)
Manitoba	4.6	(0.6)	32.9*	(1.8)	14.9	(0.9)	35.1	(1.2)	61.1	(1.4)	36.8	(0.7)	19.4	(1.4)	37.6	(1.1)
Saskatchewan	4.1	(0.5)	30.5*	(2.0)	13.0	(0.8)	34.1	(1.1)	68.1	(1.3)	36.4	(0.7)	14.8	(1.0)	37.5	(1.1)
Alberta	3.9	(0.8)	37.5	(2.9)	16.1	(1.4)	40.8	(1.5)	62.8	(1.7)	39.9	(0.9)	17.2	(1.6)	42.3*	(1.2)
British Columbia	3.6	(0.5)	35.4	(2.0)	17.1	(1.2)	36.9	(1.2)	64.0	(1.2)	39.3	(0.8)	15.3	(0.8)	39.3	(1.0)
OECD average	**6.6**	**(0.1)**	**30.5***	**(0.2)**	**22.5**	**(0.1)**	**33.6**	**(0.1)**	**59.2**	**(0.2)**	**33.7**	**(0.1)**	**11.7**	**(0.1)**	**34.1***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4ac

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

The activities we do in my classes help me think about new ways to solve problems.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.8**	**(0.2)**	**36.3***	**(0.7)**	**25.9**	**(0.5)**	**39.2**	**(0.3)**	**56.4**	**(0.6)**	**39.4**	**(0.3)**	**11.9**	**(0.5)**	**39.1**	**(0.6)**
Newfoundland and Labrador	8.6	(1.0)	32.9	(2.3)	31.6	(2.2)	35.2	(1.7)	51.2	(2.3)	35.3	(1.4)	8.6	(1.0)	36.0	(2.0)
Prince Edward Island	5.7‡	(1.8)	31.4	(4.1)	31.7	(4.1)	38.9	(2.8)	53.1	(4.4)	36.7	(2.4)	9.6‡	(2.5)	39.4	(4.0)
Nova Scotia	5.2	(0.9)	33.3	(2.1)	31.1	(2.1)	38.6	(1.5)	54.3	(1.9)	36.4	(1.2)	9.5	(1.2)	36.2	(2.1)
New Brunswick	7.6	(0.9)	34.4	(2.0)	26.7	(1.6)	35.8	(1.2)	54.1	(1.8)	35.0	(1.4)	11.6	(1.2)	35.6	(1.6)
Quebec	7.9	(0.7)	34.9*	(1.4)	27.4	(0.9)	37.9	(0.8)	52.9	(1.1)	37.6	(0.6)	11.8	(0.8)	37.0	(1.3)
Ontario	5.4	(0.4)	37.2*	(1.2)	25.1	(0.9)	40.8	(0.5)	56.4	(0.9)	41.0	(0.5)	13.2	(1.0)	39.9	(1.0)
Manitoba	5.8	(0.7)	33.1*	(1.9)	21.9	(1.1)	36.7	(1.0)	60.3	(1.4)	37.1	(0.6)	12.0	(1.1)	35.7	(1.3)
Saskatchewan	5.0	(0.7)	31.1*	(1.9)	21.7	(1.1)	35.8	(0.8)	62.7	(1.4)	36.8	(0.7)	10.6	(1.0)	35.9	(1.3)
Alberta	4.8	(0.7)	41.9	(2.8)	23.9	(1.8)	40.2	(1.2)	60.5	(1.8)	40.5	(0.9)	10.8	(1.3)	43.0	(1.6)
British Columbia	4.3	(0.4)	35.6*	(2.0)	28.2	(1.6)	38.5	(1.0)	56.3	(1.4)	39.8	(0.8)	11.2	(0.7)	39.3	(1.2)
OECD average	**7.7**	**(0.1)**	**31.7***	**(0.2)**	**29.3**	**(0.1)**	**34.1***	**(0.1)**	**54.4**	**(0.2)**	**33.6**	**(0.1)**	**8.7**	**(0.1)**	**32.9***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4ad

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

My mathematics assignments require me to come up with different solutions for a problem.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**6.4**	**(0.2)**	**37.7**	**(0.7)**	**26.2**	**(0.5)**	**39.6**	**(0.4)**	**55.5**	**(0.6)**	**38.9**	**(0.3)**	**11.9**	**(0.4)**	**39.1**	**(0.6)**
Newfoundland and Labrador	9.2	(1.1)	35.0	(2.0)	30.9	(1.8)	35.2	(1.9)	52.1	(1.8)	35.4	(1.3)	7.9	(0.9)	35.0	(2.4)
Prince Edward Island	11.0‡	(2.8)	34.2	(4.0)	29.0	(4.0)	35.3	(3.1)	52.5	(4.7)	38.0	(2.5)	7.5‡	(1.3)	37.8	(3.7)
Nova Scotia	6.3	(1.0)	35.2	(2.4)	26.4	(1.9)	38.3	(1.5)	55.5	(1.9)	36.4	(1.1)	11.8	(1.2)	37.5	(2.3)
New Brunswick	7.1	(0.9)	36.2	(1.9)	26.0	(1.7)	37.0	(1.7)	54.5	(1.5)	34.9	(1.3)	12.4	(1.2)	33.5	(1.9)
Quebec	7.5	(0.6)	37.1	(1.4)	23.8	(1.0)	38.0	(0.8)	55.1	(1.1)	37.2	(0.6)	13.6	(0.9)	36.8	(1.3)
Ontario	6.6	(0.5)	38.0*	(1.1)	26.6	(0.9)	41.4	(0.6)	54.7	(1.0)	40.5	(0.4)	12.2	(0.6)	40.0	(0.8)
Manitoba	7.4	(0.7)	35.3	(1.6)	24.5	(1.3)	37.1	(0.9)	55.5	(1.4)	36.6	(0.7)	12.7	(1.0)	36.3	(1.0)
Saskatchewan	5.1	(0.6)	33.2	(1.6)	22.4	(1.1)	37.1	(0.8)	62.2	(1.3)	36.3	(0.8)	10.3	(0.9)	36.8	(1.2)
Alberta	5.7	(0.7)	40.9	(1.7)	28.4	(1.9)	40.7	(1.0)	54.7	(1.9)	40.0	(0.9)	11.2	(1.3)	43.3*	(1.5)
British Columbia	4.2	(0.6)	38.4	(1.9)	27.8	(1.4)	38.9	(1.0)	58.0	(1.5)	39.1	(0.9)	10.0	(0.7)	39.2	(1.0)
OECD average	**8.3**	**(0.1)**	**32.1***	**(0.2)**	**29.0**	**(0.1)**	**34.4***	**(0.1)**	**53.5**	**(0.2)**	**33.5**	**(0.1)**	**9.2**	**(0.1)**	**33.0***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4ae

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

My teachers encourage me to come up with original answers.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.6**	**(0.2)**	**36.0***	**(0.6)**	**19.7**	**(0.5)**	**38.6**	**(0.4)**	**58.2**	**(0.6)**	**39.4**	**(0.2)**	**16.5**	**(0.4)**	**40.1**	**(0.6)**
Newfoundland and Labrador	5.4	(0.9)	32.3	(3.2)	17.4	(1.7)	33.4	(2.2)	59.9	(2.3)	36.4	(1.4)	17.2	(1.6)	36.5	(1.7)
Prince Edward Island	7.5‡	(1.9)	35.4	(4.8)	23.9	(3.3)	34.9	(3.1)	53.2	(3.7)	36.7	(2.4)	15.3	(3.1)	40.1	(2.6)
Nova Scotia	5.3	(0.9)	32.8*	(2.1)	21.2	(1.7)	39.5*	(1.3)	58.9	(1.8)	36.7	(1.2)	14.6	(1.2)	37.3	(1.8)
New Brunswick	6.4	(1.0)	34.3	(2.3)	21.4	(1.4)	35.7	(1.5)	57.0	(1.8)	35.4	(1.3)	15.2	(1.4)	36.3	(1.8)
Quebec	9.8	(0.7)	36.6	(1.1)	28.2	(1.1)	38.1	(0.9)	48.0	(1.2)	37.6	(0.7)	14.1	(0.8)	36.6	(1.3)
Ontario	4.8	(0.4)	35.9*	(1.3)	16.3	(0.8)	40.3	(0.7)	59.9	(1.0)	40.9	(0.4)	19.0	(0.9)	41.6	(0.9)
Manitoba	4.9	(0.5)	34.2	(2.0)	16.8	(1.1)	36.5	(0.9)	60.9	(1.4)	36.6	(0.8)	17.3	(1.1)	38.5	(1.1)
Saskatchewan	3.6	(0.5)	29.8*	(2.0)	16.9	(1.0)	35.2	(0.9)	63.6	(1.4)	36.5	(0.7)	16.0	(1.1)	37.8	(1.1)
Alberta	3.6	(0.6)	37.8	(2.9)	16.8	(1.2)	38.8	(1.3)	63.8	(1.7)	40.3	(0.8)	15.9	(1.4)	43.4*	(1.2)
British Columbia	3.8	(0.4)	35.8	(2.1)	18.9	(1.4)	38.4	(1.1)	62.5	(1.3)	39.4	(0.7)	14.8	(1.0)	39.2	(1.0)
OECD average	**8.3**	**(0.1)**	**32.2***	**(0.2)**	**28.0**	**(0.1)**	**34.5***	**(0.1)**	**52.9**	**(0.2)**	**33.4**	**(0.1)**	**10.8**	**(0.1)**	**33.0***	**(0.2)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4af

Percentage and average scores of students by pedagogies encouraging creative thinking: CREATIVE THINKING

At school, I am given a chance to express my ideas.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.0**	**(0.2)**	**35.8***	**(0.6)**	**18.0**	**(0.5)**	**38.3***	**(0.4)**	**60.8**	**(0.7)**	**39.4**	**(0.3)**	**16.2**	**(0.5)**	**39.7**	**(0.6)**
Newfoundland and Labrador	7.2	(0.9)	31.2*	(2.6)	21.8	(1.8)	35.0	(1.7)	58.1	(1.7)	35.9	(1.5)	12.9	(1.5)	35.4	(1.8)
Prince Edward Island	9.2‡	(2.5)	31.6	(4.3)	21.2	(3.3)	35.9	(3.0)	56.0	(3.7)	37.1	(2.2)	13.5	(2.2)	40.2	(3.3)
Nova Scotia	7.4	(1.0)	34.3	(2.1)	21.8	(1.7)	36.4	(1.4)	58.4	(2.0)	37.5	(1.0)	12.5	(1.2)	37.5	(2.1)
New Brunswick	6.4	(0.9)	34.3	(2.2)	21.1	(1.3)	36.3	(1.5)	55.6	(1.6)	35.6	(1.3)	16.9	(1.5)	35.6	(1.7)
Quebec	7.6	(0.7)	35.1	(1.4)	22.7	(1.0)	36.7	(0.9)	52.4	(1.2)	37.7	(0.6)	17.3	(0.9)	36.7	(1.2)
Ontario	4.1	(0.4)	36.9*	(1.3)	16.9	(0.9)	40.5	(0.6)	62.4	(1.3)	40.7	(0.5)	16.6	(0.7)	41.3	(0.7)
Manitoba	5.2	(0.6)	32.7	(2.0)	15.4	(1.1)	35.8	(1.2)	61.7	(1.5)	36.6	(0.8)	17.7	(1.1)	38.4	(0.9)
Saskatchewan	4.5	(0.5)	32.2*	(1.9)	16.2	(1.1)	35.8	(1.0)	64.6	(1.4)	36.4	(0.6)	14.7	(1.1)	37.3	(1.2)
Alberta	3.4	(0.6)	41.3	(2.4)	15.0	(1.5)	38.8	(1.1)	65.4	(1.8)	40.5	(0.9)	16.2	(1.8)	43.1*	(1.4)
British Columbia	4.0	(0.4)	33.8*	(2.3)	16.2	(1.2)	37.6*	(1.0)	65.2	(1.2)	39.7	(0.7)	14.6	(0.9)	38.9	(1.1)
OECD average	**7.4**	**(0.1)**	**31.2***	**(0.2)**	**22.4**	**(0.1)**	**33.8**	**(0.1)**	**57.3**	**(0.2)**	**33.8**	**(0.1)**	**12.9**	**(0.1)**	**33.6**	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.4b

Index of pedagogies encouraging creative thinking by sociodemographic characteristics

Canada, province, or OECD average	Index of pedagogies encouraging creative thinking													
	All students		Anglophone school systems		Francophone school systems		Difference (A - F)		Girls		Boys		Difference (G - B)	
	Score	SE	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.23**	**(0.01)**	**0.26**	**(0.01)**	**0.11**	**(0.02)**	**0.15***	**(0.03)**	**0.20**	**(0.01)**	**0.26**	**(0.02)**	**-0.06***	**(0.02)**
Newfoundland and Labrador	0.10**	(0.03)	0.10	(0.03)	--	--	--	--	0.10	(0.05)	0.11	(0.05)	-0.01	(0.08)
Prince Edward Island	0.07**	(0.07)	0.07	(0.07)	--	--	--	--	0.14	(0.10)	0.00	(0.10)	0.14	(0.13)
Nova Scotia	0.12**	(0.04)	0.12	(0.04)	0.12	(0.06)	0.01	(0.06)	0.10	(0.04)	0.15	(0.06)	-0.05	(0.07)
New Brunswick	0.17	(0.04)	0.14	(0.04)	0.24	(0.06)	-0.10	(0.07)	0.12	(0.05)	0.23	(0.05)	-0.11	(0.07)
Quebec	0.10**	(0.02)	0.09	(0.04)	0.10	(0.03)	0.00	(0.05)	0.07	(0.03)	0.12	(0.04)	-0.05	(0.04)
Ontario	0.28**	(0.02)	0.28	(0.02)	0.29	(0.03)	0.00	(0.04)	0.24	(0.02)	0.33	(0.03)	-0.09*	(0.04)
Manitoba	0.31**	(0.03)	0.31	(0.03)	0.35	(0.08)	-0.03	(0.09)	0.29	(0.03)	0.34	(0.04)	-0.05	(0.05)
Saskatchewan	0.31**	(0.03)	0.31	(0.03)	0.37	(0.17)	-0.06	(0.18)	0.36	(0.04)	0.26	(0.04)	0.10	(0.06)
Alberta	0.29	(0.04)	0.28	(0.04)	0.52	(0.10)	-0.23*	(0.11)	0.27	(0.05)	0.31	(0.06)	-0.04	(0.08)
British Columbia	0.24	(0.03)	0.24	(0.03)	--	--	--	--	0.20	(0.04)	0.28	(0.03)	-0.08	(0.04)
OECD average	**0.01****	**(0.00)**	**--**	**--**	**--**	**--**	**--**	**--**	**-0.02**	**(0.00)**	**0.04**	**(0.00)**	**-0.06***	**(0.01)**

Canada, province, or OECD average	Index of pedagogies encouraging creative thinking											
	Non-immigrant students		Immigrant students		Difference (immigrant students - non-immigrant students)		Bottom quarter of the ESCS index		Top quarter of the ESCS index		Difference (top quarter - bottom quarter)	
	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.18**	**(0.01)**	**0.32**	**(0.02)**	**0.14***	**(0.03)**	**0.21**	**(0.03)**	**0.32**	**(0.02)**	**0.11***	**(0.03)**
Newfoundland and Labrador	0.11	(0.03)	0.21	(0.14)	0.10	(0.14)	0.10	(0.08)	0.15	(0.08)	0.05	(0.11)
Prince Edward Island	0.07	(0.07)	0.40‡	(0.29)	0.33	(0.29)	-0.28	(0.13)	0.25	(0.18)	0.53*	(0.23)
Nova Scotia	0.10	(0.04)	0.37	(0.16)	0.27	(0.17)	0.08	(0.08)	0.18	(0.06)	0.10	(0.10)
New Brunswick	0.14	(0.04)	0.43	(0.11)	0.29*	(0.12)	0.19	(0.07)	0.25	(0.09)	0.06	(0.11)
Quebec	0.10	(0.03)	0.08	(0.05)	-0.03	(0.06)	0.01	(0.05)	0.19	(0.04)	0.18*	(0.06)
Ontario	0.23	(0.03)	0.35	(0.03)	0.12*	(0.04)	0.31	(0.05)	0.36	(0.04)	0.05	(0.07)
Manitoba	0.23	(0.03)	0.55	(0.06)	0.31*	(0.06)	0.33	(0.06)	0.30	(0.04)	-0.03	(0.07)
Saskatchewan	0.25	(0.03)	0.47	(0.05)	0.22*	(0.06)	0.23	(0.05)	0.34	(0.05)	0.10	(0.08)
Alberta	0.20	(0.05)	0.42	(0.06)	0.21*	(0.07)	0.22	(0.06)	0.38	(0.07)	0.16	(0.08)
British Columbia	0.20	(0.03)	0.32	(0.04)	0.12*	(0.05)	0.18	(0.06)	0.32	(0.04)	0.14	(0.08)
OECD average	**0.00**	**(0.00)**	**0.04**	**(0.02)**	**0.04***	**(0.02)**	**-0.01**	**(0.01)**	**0.01**	**(0.01)**	**0.02***	**(0.01)**

SE Standard error
Av. Average
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces.

Table B.2.4c

Index of pedagogies encouraging creative thinking and students' performance in creative thinking

Canada, province, or OECD average	Score in creative thinking, by quarters of the index of pedagogies encouraging creative thinking				Difference in creative thinking performance between students in the top quarter and students in the bottom quarter of this index		Before accounting for gender and student socioeconomic profile								After accounting for gender and student socioeconomic profile							
	Bottom quarter		Top quarter				Change in creative thinking performance per one (integer) unit change in the index of pedagogies encouraging creative thinking		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of pedagogies encouraging creative thinking		Explained variance in student relative performance (r^2 x 100)		Change in creative thinking performance per one (integer) unit change in the index of pedagogies encouraging creative thinking		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of pedagogies encouraging creative thinking		Explained variance in student relative performance (r^2 x 100)	
	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE
Canada	**38.1**	**(0.3)**	**39.8**	**(0.4)**	**1.7***	**(0.4)**	**0.5***	**(0.2)**	**0.3**	**(0.2)**	**0.3**	**(0.2)**	**32.1**	**(1.5)**	**0.5***	**(0.2)**	**7.2**	**(0.9)**	**0.3**	**(0.2)**	**34.0**	**(1.6)**
Newfoundland and Labrador	34.0	(1.6)	36.5	(1.5)	2.5	(1.3)	1.1*	(0.5)	1.1	(1.1)	0.4	(0.6)	37.7	(3.8)	1.0	(0.5)	9.5	(2.7)	0.4	(0.6)	40.7	(4.0)
Prince Edward Island	35.8	(2.9)	38.3	(2.6)	2.4	(2.5)	1.6	(0.9)	2.9	(3.1)	0.7	(0.8)	35.5	(7.0)	1.1	(0.9)	8.8	(4.8)	0.4	(0.8)	38.5	(6.6)
Nova Scotia	37.1	(1.3)	36.6	(1.5)	-0.4	(1.4)	-0.2	(0.5)	0.1	(0.3)	-0.3	(0.4)	38.2	(3.8)	-0.2	(0.5)	8.5	(2.5)	-0.3	(0.4)	41.0	(3.6)
New Brunswick	35.1	(1.3)	35.6	(1.6)	0.5	(1.3)	0.0	(0.4)	0.1	(0.2)	0.0	(0.4)	34.8	(3.8)	0.0	(0.4)	9.8	(2.7)	0.0	(0.4)	37.9	(4.2)
Quebec	36.9	(0.9)	37.2	(0.9)	0.3	(1.3)	-0.1	(0.5)	0.1	(0.2)	0.0	(0.5)	27.0	(2.6)	-0.2	(0.4)	7.9	(1.6)	-0.1	(0.5)	29.3	(2.6)
Ontario	39.7	(0.5)	41.3	(0.6)	1.6*	(0.7)	0.5	(0.3)	0.3	(0.3)	0.2	(0.2)	32.5	(2.5)	0.5*	(0.3)	6.3	(1.2)	0.2	(0.2)	34.2	(2.5)
Manitoba	35.0	(1.0)	37.7	(0.8)	2.6*	(1.1)	0.6	(0.4)	0.4	(0.5)	0.4	(0.3)	37.7	(2.8)	0.6	(0.4)	8.0	(1.5)	0.4	(0.3)	39.9	(2.7)
Saskatchewan	34.4	(0.7)	37.2	(0.9)	2.8*	(0.9)	0.9*	(0.4)	0.8	(0.7)	0.6	(0.3)	38.5	(3.1)	0.8*	(0.4)	7.5	(2.1)	0.5	(0.3)	40.3	(3.2)
Alberta	40.3	(1.0)	42.7	(1.0)	2.4*	(1.1)	0.9*	(0.4)	0.7	(0.6)	0.4	(0.4)	35.4	(3.3)	0.7	(0.4)	7.3	(2.2)	0.4	(0.4)	37.2	(3.3)
British Columbia	37.4	(0.9)	39.4	(0.9)	2.0	(1.0)	0.7	(0.4)	0.4	(0.4)	0.3	(0.4)	32.9	(3.6)	0.6	(0.4)	6.1	(1.7)	0.4	(0.4)	34.8	(3.6)
OECD average	**33.2**	**(0.1)**	**33.3**	**(0.1)**	**0.2**	**(0.1)**	**0.1***	**(0.0)**	**0.3**	**(0.0)**	**0.1***	**(0.0)**	**48.6**	**(0.4)**	**0.2***	**(0.0)**	**13.1**	**(0.3)**	**0.2***	**(0.0)**	**50.5**	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
* Significant difference within Canada, province, or OECD.
Note: "Relative performance" refers to the residual performance, attributable to purely "creative thinking" competencies, after accounting for performance in mathematics, reading, and science in a regression performed across students at the national or provincial level.

Table B.2.5a

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

Students' ratings of their agreement with statements about the degree to which creative thinking is fostered and supported by their peer and family environments

Canada	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
My friends are open to new ideas.	2.5	(0.2)	31.5*	(1.1)	9.8	(0.4)	37.7*	(0.5)	66.8	(0.6)	39.1	(0.3)	20.8	(0.5)	40.0*	(0.4)
My friends and I give one another feedback about our ideas.	2.3	(0.2)	33.3*	(1.2)	10.1	(0.4)	36.6*	(0.8)	64.8	(0.6)	39.0	(0.2)	22.8	(0.5)	40.5*	(0.4)
My friends and I encourage each other to come up with new ideas.	2.7	(0.2)	33.8*	(1.1)	14.9	(0.5)	38.4	(0.5)	61.6	(0.6)	39.1	(0.3)	20.8	(0.4)	40.3*	(0.4)
My family encourages me to try new things.	2.5	(0.2)	33.9*	(1.1)	9.4	(0.3)	36.6*	(0.7)	57.4	(0.6)	38.8	(0.3)	30.7	(0.6)	40.4*	(0.3)
At home, I am encouraged to use my imagination.	3.6	(0.2)	35.5*	(0.8)	16.2	(0.4)	38.6	(0.5)	55.5	(0.7)	38.7	(0.3)	24.7	(0.6)	40.5*	(0.4)
Discussions I have at home help me come up with new ideas.	5.5	(0.3)	36.9*	(0.7)	17.1	(0.5)	38.8	(0.6)	54.1	(0.6)	38.7	(0.3)	23.4	(0.5)	40.4*	(0.4)

SE Standard error
Av. Average
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5aa

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

My friends are open to new ideas.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**2.5**	**(0.2)**	**31.5***	**(1.1)**	**9.8**	**(0.4)**	**37.7***	**(0.5)**	**66.8**	**(0.6)**	**39.1**	**(0.3)**	**20.8**	**(0.5)**	**40.0***	**(0.4)**
Newfoundland and Labrador	3.7‡	(0.9)	29.8	(3.1)	13.5	(1.2)	32.4	(2.1)	66.4	(1.9)	35.4	(1.4)	16.4	(1.5)	36.5	(1.9)
Prince Edward Island	U‡	(1.7)	33.0	(5.2)	9.3‡	(2.6)	32.2	(5.0)	63.7	(3.9)	37.6	(2.3)	22.6	(4.2)	37.5	(3.0)
Nova Scotia	3.0‡	(0.7)	31.9	(2.9)	11.8	(1.2)	36.0	(1.4)	67.1	(2.0)	37.0	(1.1)	18.1	(1.5)	38.0	(1.7)
New Brunswick	3.2	(0.5)	29.7*	(2.4)	10.4	(1.1)	33.7	(1.8)	61.6	(1.9)	35.3	(1.3)	24.8	(1.6)	37.0	(1.4)
Quebec	3.3	(0.4)	30.1*	(2.2)	9.3	(0.6)	36.6	(1.1)	62.4	(1.1)	37.2	(0.7)	24.9	(1.1)	38.8	(0.9)
Ontario	2.2	(0.3)	34.3*	(1.8)	9.5	(0.6)	39.8	(0.9)	67.2	(1.1)	40.7	(0.4)	21.0	(0.9)	41.4	(0.6)
Manitoba	2.5	(0.3)	29.2*	(2.0)	11.4	(1.0)	35.6	(1.2)	67.3	(1.4)	36.4	(0.7)	18.8	(1.1)	37.2	(0.9)
Saskatchewan	2.5	(0.4)	30.3*	(2.2)	10.1	(0.9)	34.6	(1.2)	70.9	(1.1)	36.3	(0.6)	16.5	(1.0)	37.1	(1.1)
Alberta	2.0‡	(0.5)	30.3*	(4.3)	8.7	(1.4)	37.1	(1.9)	71.0	(1.9)	40.5	(0.8)	18.3	(1.3)	42.5	(1.3)
British Columbia	2.2	(0.4)	30.6*	(2.5)	11.2	(1.0)	38.4	(1.2)	68.0	(1.2)	39.3	(0.8)	18.6	(1.2)	38.8	(1.0)
OECD average	**3.7**	**(0.1)**	**26.8***	**(0.2)**	**11.7**	**(0.1)**	**32.3***	**(0.1)**	**67.4**	**(0.2)**	**33.8**	**(0.1)**	**17.2**	**(0.1)**	**34.5***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5ab

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

My friends and I give one another feedback about our ideas.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**2.3**	**(0.2)**	**33.3***	**(1.2)**	**10.1**	**(0.4)**	**36.6***	**(0.8)**	**64.8**	**(0.6)**	**39.0**	**(0.2)**	**22.8**	**(0.5)**	**40.5***	**(0.4)**
Newfoundland and Labrador	3.5‡	(0.9)	27.2*	(3.9)	12.5	(1.4)	32.8	(2.2)	63.7	(2.5)	35.4	(1.5)	20.2	(1.8)	37.3	(1.8)
Prince Edward Island	U‡	(1.3)	32.3	(7.8)	11.6‡	(2.6)	34.6	(4.4)	67.8	(3.7)	36.3	(2.3)	18.2	(3.7)	38.7	(3.0)
Nova Scotia	3.3	(0.7)	31.8*	(2.9)	9.7	(1.0)	34.2	(1.5)	66.4	(1.7)	37.1	(1.2)	20.5	(1.3)	37.7	(1.5)
New Brunswick	2.9	(0.5)	30.3*	(2.4)	10.9	(1.2)	33.3	(1.9)	63.5	(1.9)	35.5	(1.3)	22.7	(1.5)	37.3	(1.4)
Quebec	2.5	(0.4)	31.5*	(2.1)	9.7	(0.6)	35.1	(1.3)	59.8	(1.1)	37.4	(0.6)	28.0	(1.1)	38.6	(0.9)
Ontario	2.3	(0.3)	36.7*	(1.8)	9.9	(0.7)	38.0*	(1.2)	65.5	(1.0)	40.4	(0.4)	22.4	(0.8)	42.1*	(0.6)
Manitoba	2.2	(0.4)	28.0*	(2.3)	12.0	(0.9)	34.2*	(1.2)	64.7	(1.4)	36.7	(0.7)	21.1	(1.4)	38.3	(1.1)
Saskatchewan	2.8	(0.4)	30.2*	(2.1)	11.7	(0.8)	35.4	(1.3)	67.5	(1.3)	36.0	(0.6)	18.1	(1.2)	38.6*	(1.0)
Alberta	1.6‡	(0.5)	31.9	(4.9)	8.7	(1.2)	38.3	(1.9)	68.0	(1.6)	40.2	(0.8)	21.6	(1.4)	43.0*	(1.3)
British Columbia	2.1‡	(0.4)	32.8*	(2.5)	11.4	(1.0)	36.4*	(1.4)	66.9	(1.4)	39.3	(0.8)	19.6	(1.1)	39.2	(1.1)
OECD average	**3.4**	**(0.1)**	**27.7***	**(0.2)**	**12.0**	**(0.1)**	**31.0***	**(0.1)**	**64.3**	**(0.2)**	**33.7**	**(0.1)**	**20.3**	**(0.1)**	**35.3***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5ac

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

My friends and I encourage each other to come up with new ideas.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**2.7**	**(0.2)**	**33.8***	**(1.1)**	**14.9**	**(0.5)**	**38.4**	**(0.5)**	**61.6**	**(0.6)**	**39.1**	**(0.3)**	**20.8**	**(0.4)**	**40.3***	**(0.4)**
Newfoundland and Labrador	3.8	(0.8)	29.6	(3.1)	16.9	(1.6)	34.9	(2.0)	60.4	(2.1)	35.2	(1.5)	18.8	(1.7)	37.6	(1.7)
Prince Edward Island	U‡	(1.4)	32.8	(6.4)	15.8	(3.0)	36.9	(3.6)	66.1	(3.4)	37.0	(2.5)	15.1	(2.9)	36.6	(2.8)
Nova Scotia	3.4	(0.7)	34.0	(2.8)	17.4	(1.6)	36.4	(1.7)	60.5	(2.0)	37.1	(1.1)	18.7	(1.5)	37.3	(1.6)
New Brunswick	3.2	(0.4)	30.9	(2.4)	12.9	(1.1)	35.1	(1.5)	61.4	(1.5)	35.4	(1.3)	22.5	(1.5)	36.0	(1.6)
Quebec	3.4	(0.5)	32.3*	(1.9)	14.5	(0.8)	36.8	(1.0)	57.2	(1.3)	37.4	(0.6)	24.9	(1.0)	38.2	(1.0)
Ontario	2.5	(0.3)	36.3*	(1.8)	14.2	(0.8)	39.4	(0.7)	61.8	(1.0)	40.6	(0.5)	21.5	(0.8)	41.9*	(0.6)
Manitoba	2.9	(0.6)	29.8*	(2.2)	18.0	(0.9)	36.5	(0.9)	59.7	(1.4)	36.6	(0.8)	19.4	(1.3)	37.4	(1.1)
Saskatchewan	2.9	(0.5)	30.8*	(1.9)	16.7	(1.0)	36.9	(0.9)	64.1	(1.4)	36.2	(0.7)	16.3	(1.2)	37.2	(1.1)
Alberta	2.2‡	(0.5)	35.2	(3.8)	14.2	(1.3)	40.9	(1.2)	65.3	(1.8)	40.2	(0.9)	18.2	(1.0)	43.3*	(1.3)
British Columbia	2.3	(0.4)	32.7*	(2.8)	16.1	(1.5)	38.1	(1.1)	64.1	(1.6)	39.6	(0.8)	17.5	(0.9)	39.6	(1.0)
OECD average	**3.7**	**(0.1)**	**28.9***	**(0.2)**	**17.1**	**(0.1)**	**33.0***	**(0.1)**	**61.1**	**(0.2)**	**33.6**	**(0.1)**	**18.1**	**(0.1)**	**34.8***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5ad

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

My family encourages me to try new things.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**2.5**	**(0.2)**	**33.9***	**(1.1)**	**9.4**	**(0.3)**	**36.6***	**(0.7)**	**57.4**	**(0.6)**	**38.8**	**(0.3)**	**30.7**	**(0.6)**	**40.4***	**(0.3)**
Newfoundland and Labrador	3.6‡	(1.1)	27.8*	(3.5)	8.6	(1.1)	34.3	(1.8)	61.7	(2.2)	34.8	(1.4)	26.1	(1.9)	37.1	(1.7)
Prince Edward Island	U‡	(1.8)	32.5	(5.8)	8.2‡	(1.9)	31.7	(4.3)	50.3	(3.9)	37.8	(2.6)	37.1	(3.6)	37.9	(2.5)
Nova Scotia	2.5‡	(0.7)	30.2*	(3.1)	8.2	(0.9)	34.8	(1.9)	57.0	(1.9)	36.4	(1.3)	32.4	(1.7)	38.2	(1.2)
New Brunswick	3.7	(0.7)	32.5	(2.7)	9.7	(1.1)	33.7	(1.7)	56.2	(1.6)	35.0	(1.1)	30.4	(1.6)	37.0	(1.6)
Quebec	3.0	(0.4)	32.6*	(2.3)	10.5	(0.6)	35.4	(1.1)	51.3	(1.0)	37.3	(0.7)	35.2	(1.0)	38.3	(0.7)
Ontario	2.3	(0.3)	36.7*	(1.6)	9.0	(0.5)	37.4*	(1.0)	57.8	(1.3)	40.3	(0.4)	30.9	(1.1)	42.1*	(0.6)
Manitoba	2.5	(0.5)	30.0*	(2.8)	9.1	(0.9)	34.9	(1.3)	58.1	(1.6)	36.1	(0.7)	30.3	(1.4)	38.5*	(1.0)
Saskatchewan	2.7	(0.4)	28.5*	(2.2)	11.1	(0.8)	34.3	(1.5)	59.6	(1.3)	36.0	(0.8)	26.6	(1.4)	37.9*	(0.8)
Alberta	2.6‡	(0.6)	36.4	(3.8)	8.4	(0.9)	39.1	(2.0)	61.0	(1.9)	39.8	(0.9)	28.0	(2.0)	43.1*	(0.9)
British Columbia	1.8‡	(0.4)	30.4*	(3.2)	9.7	(0.9)	36.5	(1.5)	61.3	(1.3)	39.1	(0.7)	27.2	(1.5)	39.6	(0.9)
OECD average	**3.8**	**(0.1)**	**29.6***	**(0.2)**	**13.1**	**(0.1)**	**32.4***	**(0.1)**	**57.6**	**(0.1)**	**33.4**	**(0.1)**	**25.4**	**(0.1)**	**35.1***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5ae

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

At home, I am encouraged to use my imagination.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**3.6**	**(0.2)**	**35.5***	**(0.8)**	**16.2**	**(0.4)**	**38.6**	**(0.5)**	**55.5**	**(0.7)**	**38.7**	**(0.3)**	**24.7**	**(0.6)**	**40.5***	**(0.4)**
Newfoundland and Labrador	5.9	(1.1)	30.2	(3.0)	17.7	(1.7)	32.9	(2.3)	55.5	(2.0)	35.9	(1.4)	20.9	(1.9)	37.2	(1.5)
Prince Edward Island	U‡	(1.8)	33.8	(5.2)	17.1	(3.1)	34.1	(2.9)	54.2	(4.3)	37.4	(2.6)	23.4	(3.2)	38.6	(2.5)
Nova Scotia	5.2	(0.9)	33.5	(2.4)	15.8	(1.6)	35.9	(1.8)	56.6	(1.9)	37.0	(1.0)	22.4	(1.5)	38.6	(1.4)
New Brunswick	4.5	(0.8)	33.0	(2.7)	12.8	(1.2)	35.1	(1.7)	56.1	(1.7)	34.9	(1.3)	26.6	(1.5)	36.6	(1.7)
Quebec	4.7	(0.6)	34.5	(1.7)	15.8	(0.8)	36.8	(1.0)	50.7	(1.1)	36.9	(0.8)	28.9	(1.1)	38.4	(0.8)
Ontario	3.2	(0.4)	37.4*	(1.5)	15.7	(0.7)	40.1	(0.9)	56.6	(1.3)	40.4	(0.5)	24.6	(1.0)	41.7*	(0.6)
Manitoba	4.4	(0.6)	33.4	(2.2)	16.8	(1.2)	35.9	(1.1)	55.5	(1.5)	36.0	(0.8)	23.3	(1.2)	38.3*	(0.9)
Saskatchewan	3.3	(0.6)	32.1	(2.1)	15.9	(1.1)	35.7	(1.2)	60.2	(1.5)	36.0	(0.7)	20.5	(1.3)	37.8	(1.0)
Alberta	3.4	(0.7)	36.2	(2.7)	16.3	(1.3)	40.8	(1.3)	57.1	(1.9)	39.4	(0.9)	23.2	(1.9)	43.7*	(1.1)
British Columbia	2.4	(0.5)	36.1	(3.1)	18.9	(1.1)	38.5	(1.0)	57.2	(1.3)	39.1	(0.8)	21.6	(1.2)	40.0	(1.0)
OECD average	**4.8**	**(0.1)**	**30.5***	**(0.2)**	**18.7**	**(0.1)**	**33.1***	**(0.1)**	**54.9**	**(0.2)**	**33.4**	**(0.1)**	**21.6**	**(0.1)**	**34.9***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
U Too unreliable to be published.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5af

Percentage and average scores of students by peer and family environments encouraging creative thinking: CREATIVE THINKING

Discussions I have at home help me come up with new ideas.

Canada, province, or OECD average	Strongly disagree				Disagree				Agree				Strongly agree			
	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE	%	SE	Av.	SE
Canada	**5.5**	**(0.3)**	**36.9***	**(0.7)**	**17.1**	**(0.5)**	**38.8**	**(0.6)**	**54.1**	**(0.6)**	**38.7**	**(0.3)**	**23.4**	**(0.5)**	**40.4***	**(0.4)**
Newfoundland and Labrador	8.4	(1.4)	32.0	(2.1)	18.0	(1.7)	34.8	(1.9)	54.3	(2.0)	35.2	(1.6)	19.3	(1.7)	37.2	(1.6)
Prince Edward Island	7.0‡	(1.9)	32.2	(3.5)	20.1	(3.5)	36.5	(3.3)	49.0	(4.0)	38.3	(2.4)	23.9	(3.6)	37.3	(2.9)
Nova Scotia	6.7	(1.0)	33.9	(2.3)	16.8	(1.5)	38.0	(1.4)	55.7	(1.9)	36.6	(1.0)	20.7	(1.6)	38.9	(1.5)
New Brunswick	5.8	(1.0)	35.3	(2.4)	13.4	(1.0)	35.4	(1.6)	54.7	(1.4)	34.8	(1.3)	26.1	(1.3)	36.5	(1.5)
Quebec	6.3	(0.6)	35.8	(1.3)	16.7	(0.8)	36.8	(0.9)	49.1	(1.2)	36.9	(0.7)	27.9	(1.2)	38.8	(1.0)
Ontario	4.9	(0.4)	38.1	(1.1)	16.7	(0.8)	40.6	(0.8)	54.6	(1.1)	40.3	(0.5)	23.8	(0.8)	41.8*	(0.7)
Manitoba	7.2	(0.8)	33.5	(1.6)	17.7	(1.1)	36.6	(0.9)	53.7	(1.3)	36.1	(0.9)	21.4	(1.1)	38.3*	(0.9)
Saskatchewan	5.4	(0.7)	33.5	(1.5)	17.5	(1.1)	36.1	(1.1)	58.6	(1.4)	35.7	(0.8)	18.5	(1.1)	37.6	(1.0)
Alberta	5.5	(0.7)	41.3	(1.9)	18.2	(1.5)	39.9	(1.6)	54.8	(2.0)	39.8	(0.8)	21.5	(1.8)	42.2*	(1.3)
British Columbia	4.7	(0.5)	34.8*	(1.9)	17.2	(1.2)	38.6	(1.0)	58.6	(1.4)	38.9	(0.8)	19.5	(1.4)	40.6*	(0.9)
OECD average	**6.9**	**(0.1)**	**31.5***	**(0.2)**	**19.9**	**(0.1)**	**33.6***	**(0.1)**	**53.2**	**(0.2)**	**33.4**	**(0.1)**	**20.1**	**(0.1)**	**34.7***	**(0.1)**

SE Standard error
Av. Average
‡ There are fewer than 30 observations.
* Significant difference compared to the average score in the "Agree" category.

Table B.2.5b

Index of peer and family environments encouraging creative thinking by sociodemographic characteristics

Canada, province, or OECD average	Index of peer and family environments encouraging creative thinking													
	All students		Anglophone school systems		Francophone school systems		Difference (A - F)		Girls		Boys		Difference (G - B)	
	Score	SE	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.15**	**(0.01)**	**0.13**	**(0.01)**	**0.24**	**(0.02)**	**-0.12***	**(0.03)**	**0.25**	**(0.02)**	**0.05**	**(0.01)**	**0.20***	**(0.02)**
Newfoundland and Labrador	0.01**	(0.04)	0.01	(0.04)	--	--	--	--	0.19	(0.06)	-0.18	(0.05)	0.36*	(0.08)
Prince Edward Island	0.10	(0.08)	0.10	(0.08)	--	--	--	--	0.32	(0.13)	-0.13	(0.09)	0.45*	(0.16)
Nova Scotia	0.08**	(0.03)	0.07	(0.03)	0.32	(0.07)	-0.24*	(0.08)	0.18	(0.05)	-0.02	(0.05)	0.20*	(0.07)
New Brunswick	0.19	(0.03)	0.15	(0.04)	0.29	(0.05)	-0.14*	(0.06)	0.29	(0.04)	0.09	(0.05)	0.21*	(0.06)
Quebec	0.23**	(0.02)	0.11	(0.03)	0.25	(0.03)	-0.13*	(0.04)	0.38	(0.03)	0.08	(0.03)	0.30*	(0.04)
Ontario	0.17	(0.02)	0.17	(0.02)	0.21	(0.03)	-0.04	(0.04)	0.26	(0.02)	0.08	(0.02)	0.18*	(0.03)
Manitoba	0.10**	(0.03)	0.09	(0.03)	0.18	(0.08)	-0.09	(0.08)	0.18	(0.04)	0.00	(0.04)	0.18*	(0.05)
Saskatchewan	0.05**	(0.03)	0.05	(0.03)	0.20	(0.15)	-0.15	(0.16)	0.11	(0.04)	-0.01	(0.04)	0.11*	(0.05)
Alberta	0.13	(0.04)	0.13	(0.04)	0.32	(0.09)	-0.20*	(0.09)	0.19	(0.05)	0.06	(0.05)	0.13*	(0.06)
British Columbia	0.08**	(0.03)	0.08	(0.03)	--	--	--	--	0.17	(0.03)	-0.01	(0.04)	0.18*	(0.05)
OECD average	**0.01****	**(0.00)**	**--**	**--**	**--**	**--**	**--**	**--**	**0.10**	**(0.00)**	**-0.09**	**(0.00)**	**0.19***	**(0.01)**

Canada, province, or OECD average	Index of peer and family environments encouraging creative thinking											
	Non-immigrant students		Immigrant students		Difference (immigrant students - non-immigrant students)		Bottom quarter of the ESCS index		Top quarter of the ESCS index		Difference (top quarter - bottom quarter)	
	Av.	SE	Av.	SE	Dif.	SE	Av.	SE	Av.	SE	Dif.	SE
Canada	**0.15**	**(0.02)**	**0.18**	**(0.01)**	**0.04**	**(0.02)**	**-0.01**	**(0.02)**	**0.34**	**(0.02)**	**0.34***	**(0.03)**
Newfoundland and Labrador	0.01	(0.04)	0.00	(0.12)	-0.01	(0.13)	-0.21	(0.07)	0.33	(0.07)	0.54*	(0.10)
Prince Edward Island	0.13	(0.09)	0.06‡	(0.22)	-0.07	(0.25)	-0.29	(0.14)	0.20	(0.15)	0.49*	(0.21)
Nova Scotia	0.06	(0.04)	0.39	(0.13)	0.33*	(0.14)	-0.11	(0.06)	0.34	(0.06)	0.45*	(0.09)
New Brunswick	0.17	(0.03)	0.32	(0.13)	0.14	(0.13)	-0.07	(0.06)	0.44	(0.06)	0.50*	(0.10)
Quebec	0.26	(0.03)	0.19	(0.04)	-0.07	(0.05)	0.06	(0.05)	0.43	(0.05)	0.37*	(0.07)
Ontario	0.14	(0.03)	0.21	(0.02)	0.06	(0.03)	0.05	(0.04)	0.35	(0.04)	0.30*	(0.05)
Manitoba	0.07	(0.04)	0.20	(0.05)	0.13*	(0.06)	-0.14	(0.07)	0.32	(0.05)	0.46*	(0.08)
Saskatchewan	0.02	(0.03)	0.17	(0.06)	0.16*	(0.07)	-0.09	(0.06)	0.21	(0.05)	0.30*	(0.08)
Alberta	0.12	(0.06)	0.15	(0.05)	0.04	(0.07)	-0.03	(0.09)	0.28	(0.07)	0.31*	(0.11)
British Columbia	0.06	(0.03)	0.11	(0.04)	0.05	(0.05)	-0.06	(0.05)	0.20	(0.04)	0.26*	(0.06)
OECD average	**0.01**	**(0.00)**	**-0.06**	**(0.01)**	**-0.08***	**(0.01)**	**-0.18**	**(0.01)**	**0.17**	**(0.01)**	**0.35***	**(0.01)**

SE Standard error
Av. Average
Dif. Difference
-- Not available.
‡ There are fewer than 30 observations.
* Significant difference within Canada, province, or OECD.
** Significant difference compared to Canada.
Note: Because Newfoundland and Labrador and Prince Edward Island did not oversample students by language, and no francophone students in British Columbia completed the creative thinking portion of the student questionnaire, results for only English-language schools are available for these provinces.

Table B.2.5c

Index of peer and family environments encouraging creative thinking and performance in creative thinking

Canada, province, or OECD average	Score in creative thinking, by quarters of the index of peer and family environments encouraging creative thinking				Difference in creative thinking performance between students in the top quarter and students in the bottom quarter of this index		Before accounting for gender and student socioeconomic profile								After accounting for gender and student socioeconomic profile							
	Bottom quarter		Top quarter				Change in creative thinking performance per one (integer) unit change in the index of peer and family environments encouraging creative thinking		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of peer and family environments encouraging creative thinking		Explained variance in student relative performance (r^2 x 100)		Change in creative thinking performance per one (integer) unit change in the index of peer and family environments encouraging creative thinking		Explained variance in student performance (r^2 x 100)		Change in relative creative thinking performance per one (integer) unit change in the index of peer and family environments encouraging creative thinking		Explained variance in student relative performance (r^2 x 100)	
	Av.	SE	Av.	SE	Dif.	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE	Dif.	SE	%	SE
Canada	**37.5**	**(0.4)**	**40.7**	**(0.4)**	**3.2***	**(0.4)**	**1.2***	**(0.1)**	**1.3**	**(0.3)**	**0.7***	**(0.1)**	**32.6**	**(1.4)**	**0.8***	**(0.2)**	**7.6**	**(0.9)**	**0.5***	**(0.1)**	**34.3**	**(1.5)**
Newfoundland and Labrador	32.0	(1.7)	37.8	(1.5)	5.8*	(1.3)	2.0*	(0.5)	3.4	(1.6)	1.1*	(0.4)	39.2	(3.9)	1.2*	(0.5)	10.8	(2.9)	0.7	(0.4)	41.8	(4.0)
Prince Edward Island	35.1	(2.7)	37.8	(2.6)	2.6	(2.4)	1.3	(0.9)	1.8	(2.2)	0.7	(0.8)	35.9	(6.8)	0.7	(0.8)	8.1	(4.3)	0.3	(0.8)	38.3	(6.5)
Nova Scotia	35.3	(1.3)	38.9	(1.3)	3.5*	(1.2)	1.2*	(0.5)	1.2	(0.9)	0.5	(0.4)	38.9	(3.6)	0.6	(0.5)	8.3	(2.4)	0.3	(0.4)	41.4	(3.4)
New Brunswick	35.0	(1.4)	37.2	(1.7)	2.2	(1.2)	0.9*	(0.4)	0.8	(0.7)	0.3	(0.4)	35.0	(3.7)	0.3	(0.4)	9.8	(2.6)	-0.1	(0.4)	38.1	(4.0)
Quebec	35.8	(0.8)	38.6	(0.9)	2.9*	(1.0)	1.1*	(0.4)	1.2	(0.8)	0.6	(0.4)	27.3	(2.7)	0.6	(0.4)	8.4	(1.7)	0.4	(0.4)	29.4	(2.6)
Ontario	39.2	(0.6)	42.1	(0.5)	3.0*	(0.8)	1.2*	(0.3)	1.4	(0.6)	0.7*	(0.3)	32.9	(2.4)	0.9*	(0.3)	6.9	(1.2)	0.5	(0.3)	34.5	(2.4)
Manitoba	34.6	(0.8)	38.3	(0.9)	3.7*	(0.9)	1.3*	(0.4)	1.6	(0.8)	0.8*	(0.3)	38.4	(2.6)	0.8*	(0.3)	8.3	(1.7)	0.6*	(0.3)	40.4	(2.6)
Saskatchewan	35.1	(0.8)	38.3	(0.8)	3.2*	(1.0)	1.2*	(0.4)	1.3	(0.8)	0.7	(0.4)	38.7	(3.0)	0.8*	(0.4)	7.4	(2.0)	0.6	(0.4)	40.3	(3.0)
Alberta	39.4	(1.3)	43.1	(1.1)	3.7*	(1.2)	1.7*	(0.5)	2.3	(1.1)	1.1*	(0.5)	36.5	(3.3)	1.3*	(0.5)	8.1	(2.3)	0.9	(0.5)	38.1	(3.3)
British Columbia	37.2	(0.9)	40.3	(0.9)	3.1*	(0.9)	1.0*	(0.4)	0.8	(0.5)	0.5	(0.3)	33.6	(3.5)	0.6	(0.3)	6.2	(1.8)	0.3	(0.3)	35.2	(3.5)
OECD average	**31.9**	**(0.1)**	**35.4**	**(0.1)**	**3.6***	**(0.1)**	**1.3***	**(0.0)**	**1.5**	**(0.1)**	**0.5***	**(0.0)**	**48.4**	**(0.4)**	**0.7***	**(0.0)**	**13.2**	**(0.3)**	**0.3***	**(0.0)**	**50.1**	**(0.4)**

Av. Average
SE Standard error
Dif. Difference
* Significant difference within Canada, province, or OECD.
Note: "Relative performance" refers to the residual performance, attributable to purely "creative thinking" competencies, after accounting for performance in mathematics, reading, and science in a regression performed across students at the national or provincial level.