

# Survey on Social and Emotional Skills (SSES): Moscow (the Russian Federation)



## The OECD's Survey on Social and Emotional Skills

Research shows that both cognitive, and social and emotional skills improve life outcomes at a societal and an individual level. Considerable information exists on the development of cognitive skills but is lacking for social and emotional skills. The OECD's Survey on Social and Emotional Skills (SSES) was established to fill this important information gap.

The SSES aims to:

- Provide participating cities with information on their students' social and emotional skills.
- Identify factors in students' home, school and peer environments that promote or hinder the development of social and emotional skills.
- Explore how broader policy, cultural and socio-economic contexts influence these skills.
- Demonstrate that valid, reliable, comparable information on social and emotional skills can be produced across diverse populations and settings.

## What are social and emotional skills?

Social and emotional skills are individual abilities, attributes and characteristics that are important for academic success, employability, active citizenship and well-being. They encompass behavioural dispositions, internal states, approaches to tasks, and management and control of behaviour and feelings. Beliefs about the self and the world that characterise an individual's relationships to others are also components of social and emotional skills.

Educators and policy makers are increasingly seeking to complement the focus on academic abilities such as mathematics, reading, or scientific literacy with attention to social and emotional capabilities in order to boost students' prospects as full participants in society and active citizens. Enhancing specific social and emotional skills boosts students' ability to develop their cognitive skills. But the benefits of developing children's social-emotional skills go beyond cognitive development and academic outcomes. They also improve mental health and other important life outcomes. Inconspicuous yet significantly impactful, social and emotional skills help shape individuals' behaviours and lifestyles, which, in turn, shape their socio-economic outcomes. Together, social, emotional and cognitive skills constitute a comprehensive toolbox, essential to students' success at school and beyond.

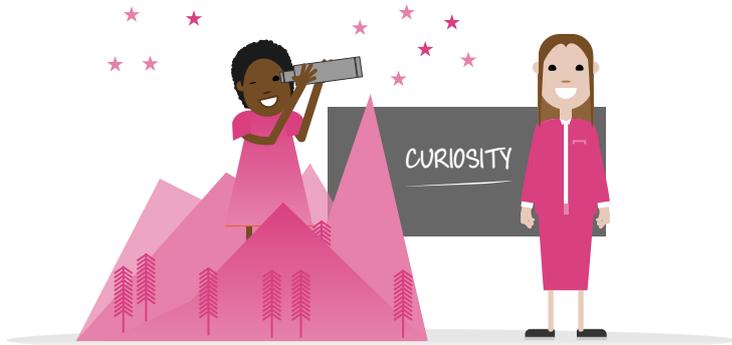
The OECD Survey on Social and Emotional Skills (SSES) focuses on 17 social and emotional skills ranging from curiosity and creativity through to emotional control (see Figure 1). These skills have been selected according to three main criteria. First, previous research shows that they are associated with individuals' educational attainment, labour market outcomes, health and well-being. Second, they can be improved through interventions and policy measures during the years a student spends in school. Third, they are suitable for comparability across countries and age cohorts.

**Figure 1. Description of the skills included in the Survey on Social and Emotional Skills**

DOMAINS	SKILLS	DESCRIPTION
OPEN-MINDEDNESS (Openness to experience)	CURIOSITY	Interest in ideas and love of learning, understanding and intellectual exploration; an inquisitive mind-set.
	TOLERANCE	Is open to different points of view, values diversity, is appreciative of foreign people and cultures.
	CREATIVITY	Generating novel ways to do or think about things through exploring, learning from failure, insight and vision.
TASK PERFORMANCE (Conscientiousness)	RESPONSIBILITY	Able to honour commitments, and be punctual and reliable.
	SELF-CONTROL	Able to avoid distractions and sudden impulses and focus attention on the current task in order to achieve personal goals.
	PERSISTENCE	Persevering in tasks and activities until they get done.
ENGAGING WITH OTHERS (Extraversion)	SOCIABILITY	Able to approach others, both friends and strangers, initiating and maintaining social connections.
	ASSERTIVENESS	Able to confidently voice opinions, needs, and feelings, and exert social influence.
	ENERGY	Approaching daily life with energy, excitement and spontaneity.
EMOTION REGULATION (Emotional stability)	STRESS RESISTANCE	Effectiveness in modulating anxiety and able to calmly solve problems (is relaxed, handles stress well).
	OPTIMISM	Positive and optimistic expectations for self and life in general.
	EMOTIONAL CONTROL	Effective strategies for regulating temper, anger and irritation in the face of frustrations.
COLLABORATION (Agreeableness)	EMPATHY	Understanding and caring for others and their well-being that leads to valuing and investing in close relationships.
	TRUST	Assuming that others generally have good intentions and forgiving those who have done wrong.
	CO-OPERATION	Living in harmony with others and valuing interconnectedness among all people.
ADDITIONAL INDICES	ACHIEVEMENT MOTIVATION	Setting high standards for oneself and working hard to meet them.
	SELF-EFFICACY	The strength of individuals' beliefs in their ability to execute tasks and achieve goals.

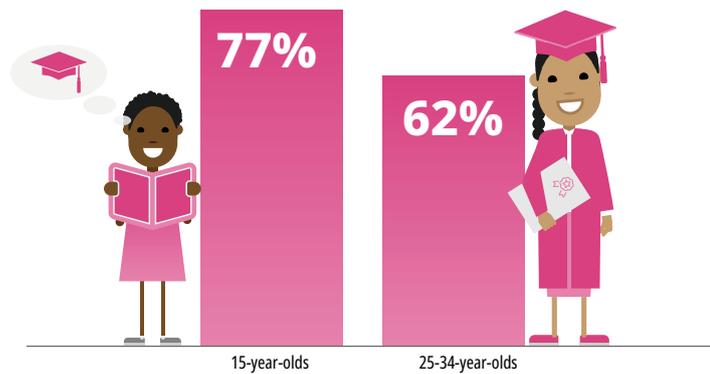
**Source:** Assessment Framework of the Survey on Social and Emotional Skills (Kankaraš and Suarez-Alvarez, 2019[1])

# HIGHLIGHTS FOR MOSCOW (THE RUSSIAN FEDERATION)



In Moscow, curiosity is the social and emotional skill most strongly related to school grades. Persistence as well as assertiveness are also important, but to a lesser extent.

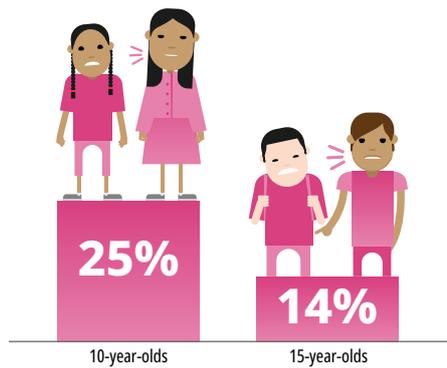
In all participating cities and particularly so in Moscow, students tend to have higher educational expectations when they report higher levels of curiosity.



In Moscow, 77% of 15-year-olds reported that they expected to go on and complete a tertiary degree – higher than the share of 25 to 34-year-olds who are tertiary-educated in the Russian Federation in 2019 (62%).

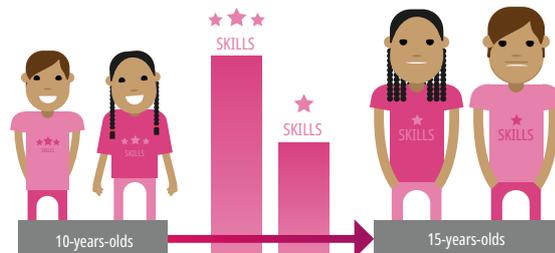


15-year-old boys exhibit higher skills in the domains of emotional regulation (stress resistance, optimism and emotional control) and engaging with others (sociability, assertiveness, energy) in Moscow and in all participating cities. Likewise, 15-year-old girls exhibit higher levels of responsibility, empathy, co-operation and tolerance. Overall, gender differences in students' social and emotional skills are slightly more pronounced in Moscow than on average across the participating cities.



In Moscow, 25% of 10-year-olds and 14% of 15-year-olds experienced bullying at least a few times a month or more. Students' exposure to bullying is negatively related to almost all social and emotional skills.

On average across participating cities, socio-economically advantaged students exhibit higher levels of every social and emotional skill measured by SSES.



15-year-olds exhibit lower social and emotional skills than 10-year-olds in Moscow and on average across participating cities. Co-operation levels among students in Moscow drop more substantially between the ages of 10 and 15 than in most of the other participating cities.



Students who participate in after-school arts activities report higher levels of creativity, particularly among 15-year-olds. Differences in creativity levels between students participating and not participating in arts activities are particularly strong in Moscow compared to other participating cities.

Find more about the findings of the **Survey on Social and Emotional Skills** in the international report: OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>

## The context of social and emotional learning in Moscow (the Russian Federation)

Moscow, the capital city of the Russian Federation (henceforth referred to as “Russia”), is one of 10 cities that took part in the OECD Survey on Social and Emotional Skills (SSES) in 2019 (see Box 1 for demographic information about the city of Moscow). With more than 12 million inhabitants, Moscow is the second most populous city participating in SSES, behind Istanbul (Turkey). In addition, people in Moscow are older (42 years old) on average than people in all other participating cities. Moscow also stands out with its low unemployment rate along with the SSES-participating city of Suzhou in China.

A wealth of data has been accumulated on the knowledge and cognitive skills that students and adults in Russia possess and how they compare around the world thanks to OECD surveys such as the Programme for International Student Assessment (PISA). The city of Moscow also participated in the last edition of PISA in 2018. PISA showed that 15-year-old students in Moscow (Russia) performed above the OECD average in mathematics, reading and science (OECD, 2019<sup>[2]</sup>). PISA also provided key information on equity in education in Moscow in an international comparative fashion. In the last PISA cycle in 2018, socio-economically advantaged students outperformed disadvantaged students in Moscow, but socio-economic differences in performance were substantially smaller than across OECD countries. In Moscow as well as on average in the OECD, girls significantly outperformed boys in reading. The gender gap in reading is larger in Moscow than on average in the OECD. In Moscow as on average across the OECD, boys slightly outperformed girls in mathematics, while girls and boys performed similarly in science (OECD, 2019<sup>[3]</sup>).

Russia combines a high share of tertiary-educated youth (62% of 25- to 34-year-olds in 2019, above the OECD average of 45%) (OECD, 2020<sup>[4]</sup>) and relatively low levels of expenditure on education (an estimated 3.5% of the gross domestic product (GDP) of Russia was spent on education in 2017, which is below the OECD average of 5%).

Additionally, PISA 2018 revealed that in Russia 37% of students reported being bullied at least a few times a month compared to 23% on average across OECD countries. At the same time, 81% of students in Russia (and 88% of students on average across OECD countries) agreed or strongly agreed that it is a good thing to help students who cannot defend themselves.

### Box 1. Key information about Moscow (Russia)

**City:** Moscow

**Location:** Capital city of Russia

**Population (2019):** 12 692 466 inhabitants

**Average age (2019):** 42

**Percentage of first-generation immigrants (2019):** 9%

**Share of population aged 15 or above with at least a bachelor's level (2010):** 42%

**Average unemployment level among adults aged 25-64 (2020):** 1.6%

**Sources:** <https://www.gks.ru/folder/12781>

Rosstat, [https://gks.ru/free\\_doc/new\\_site/perepis2010/croc/perepis\\_itogi1612.htm](https://gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm)

However, little is known about students' social and emotional skills and how these relate to key individual's outcomes, despite the attention paid to these skills in Russia as well as in the city of Moscow. Moscow's participation in SSES 2019 helps fill this important information gap. Schools in Moscow have a strong focus on social and emotional skills, and follow the government's guidelines in incorporating social and emotional learning across all levels of education. The Russian educational system defines social and emotional skills as personal and metacognitive outcomes. These include co-operation, self-control, tolerance and sociability. These outcomes are integrated within the general educational curriculum through a set of universal educational actions, which are defined as students' academic and work skills that contribute towards improved academic performance and overall emotional development. Schools in Moscow follow both national and local measures in facilitating these universal education actions to ensure the holistic development of their students.

## Social and emotional learning in Russia

Primary and secondary schools in Moscow (Russia) follow the Ministry of Education's Federal State Education Standards,<sup>1,2</sup> which lay out a set of mandatory requirements to implement primary and secondary general education in Russia. Primary students in Moscow are introduced to courses on Russian language and literacy to develop a sense of civic responsibility, a holistic view of Russian society and respect for its diverse nature. Directly related to the social and emotional skills assessed in SSES, these standards also place additional importance on the development of responsibility for one's actions, independent decision-making and empathy. Moreover, students are encouraged to co-operate with peers and adults in different social situations, engage in effective conflict resolution and develop a sense of motivation in their work. As students reach secondary school, they are expected to have attained a high-level understanding of these skills. Additionally, schools are urged to further develop students' moral consciousness and their understanding of social norms within peer groups and communities. While these standards are set at a national level, schools have a high degree of flexibility in implementing measures to ensure the development of social and emotional skills among primary and secondary students. The Ministry of Education provides guidance and suggestions to schools on how to best target these skills. For example, schools are encouraged to develop extracurricular programmes such as sports and recreation activities, Olympiads, conferences, excursions, and exploratory and scientific research that target specific social and emotional skills. In addition, the standards encourage schools to use subject areas such as mathematics, technology and art to enhance primary students' logical abilities, communication skills and creativity.

In addition to nationwide goals on social and emotional skills education, the Ministry of Education in Russia has introduced the National Project for Education (2019-2030), whose aim is Russia joining the ranks of the top 10 countries in the world in terms of education quality. The Project aims to develop nurturing conditions that enable students to identify, support and develop their talents and abilities. The project has a strong focus on developing students' creative interests. Extracurricular programmes such as creative competitions, festivals and patriotic events are organised. The Project also provides parents with the necessary psychological and practical guidance to promote their children's social and emotional health at home.<sup>3</sup>

In recent years, the Russian Academy of Education has recognised the importance of social and emotional development as a key driver of student success. It has improved the quality of psychological services in Russian schools (see Box 2).

<sup>1</sup> Federal State Education Standards for primary education can be found at <https://docs.edu.gov.ru/document/75cb08fb7d6b269e9ecb078bd541567b>.

<sup>2</sup> Federal State Education Standards for secondary education can be found at <https://docs.edu.gov.ru/document/8f549a94f631319a9f7f5532748d09fa/>.

<sup>3</sup> <https://edu.gov.ru/national-project/about/>

## Box 2. Improving psychological well-being services in Russian schools

In light of 21st-century digitalisation, technological development and how the (excessive) use of devices affects young people's self-regulation, emotional control and creativity, the Russian Academy of Education introduced "Growing Together with Russia" in 2019. This national project aims to develop an effective psychological assessment tool that tracks students' social and emotional development in the Russian education system. The project employs a three-tiered framework that includes psychological well-being, academic success and socialisation as key pillars of students' emotional development. The pilot phase of the project was implemented in 2019. Psychologists from participating regions in Russia were trained to diagnose psychological conditions and provide general counselling to school-age children. Approximately 11 000 students ranging from kindergarten to secondary school interacted with 150 psychologists who collected data on students' social and emotional development. The project has the following goals:

- Short term: gathering insights about the individual psychological characteristics of modern children in light of technological advancement and the increased use of devices. Using these insights to create psychological assessment tools to track students' social and emotional development
- Medium term: providing psychological well-being services to students based on their individual characteristics to reduce antisocial and suicidal behaviour, and to create a positive school environment conducive to students' social and emotional development
- Long term: improving the quality of education systems by integrating social and emotional development into academic progress to create holistic individuals with high intellectual potential

**Source:** Russian Academy of Education (2019), *Growing Together with Russia*, available at <http://rusacademedu.ru/wp-content/uploads/2020/03/rastem-s-rossiej.pdf>

## Social and emotional learning in Moscow

Schools in Moscow (Russia) also emphasise local-level programmes to develop students' social and emotional skills. These include extracurricular activities, community-driven events, local competitions and Olympiads. Students in Moscow are involved in Moscow Schooler's Saturday, which introduces students to various creative and professional fields every Saturday. These include excursions to modern art sites, space centres, and museums. There are master classes, lectures and quizzes on various topics such as history, technology, cinema and ecology. Students are introduced to sports and healthy lifestyle management as well as ideas about environmental preservation and youth activism. This develops a responsible attitude towards civic issues and the ability to communicate effectively and think creatively outside their classrooms.<sup>4</sup> Moscow's commitment to local, community-driven events as a way to foster social and emotional skills is reflected in the Open Moscow Festival 2020. It aimed to identify and develop students' creative potential, communication and collaboration skills. The festival offered activities such as making posters, shooting video and editing whereby creative ideas were developed through teamwork and collaboration.<sup>5</sup>

<sup>4</sup> [https://events.educom.ru/portal/multi\\_sat](https://events.educom.ru/portal/multi_sat)

<sup>5</sup> <https://1plus1.gppc.ru/o-festivale/>

The city of Moscow (Russia), in collaboration with the Department for Education and Science, and the Department of Culture, organises the “Museums, Parks and Estates Olympiad” every year. It aims to assess students’ metacognitive skills by introducing them to Moscow’s culture and heritage. In 2020, more than 80 000 students participated in the Olympiads. They visited historical sites, museums and estates, and interacted with poets, writers and artists. The knowledge gained is assessed through on-site and home-based questionnaires. This event increases students’ civic engagement and citizenship skills, allowing them to interact with their heritage, and develop social and emotional skills such as curiosity, sociability and creativity.<sup>6</sup>

While this overview provides some context with which to examine findings from SSES for the city of Moscow (Russia), no conclusion can be drawn from SSES as to how elements of this context influence social and emotional learning in Moscow.

## Social and emotional skills matter for academic success

Students’ school achievement is one of the main drivers of success in life. It is linked to later educational attainment but also to important life outcomes like employment, earnings, health and well-being. However, having the same academic performance in school does not always lead to the same life outcomes. One potential reason why some students are more likely to succeed than others is that they have developed specific social and emotional skills, which intervene in the equation.

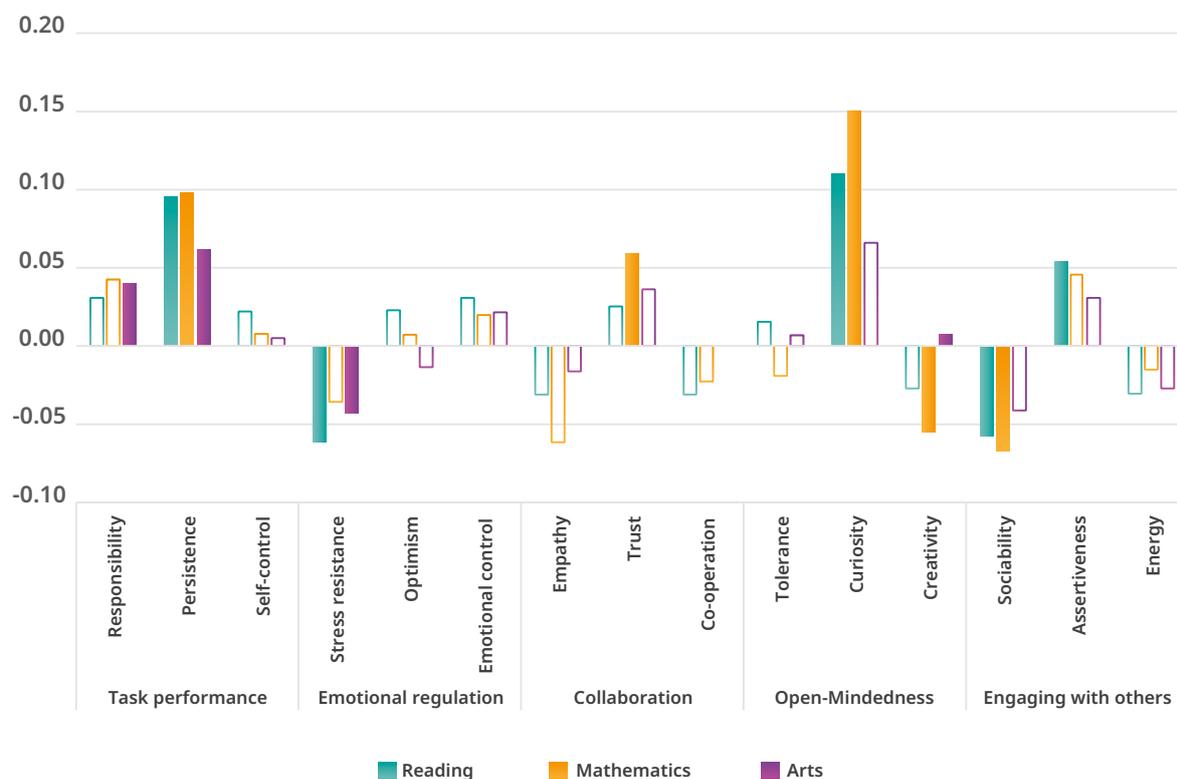
In all participating cities but Ottawa (Canada), SSES collected information on students’ school grades in three subjects: reading, mathematics and the arts along with the results of a short cognitive ability test administered to participating students. SSES data show that students’ social and emotional skills are significant predictors of school grades (Figure 2 and Figure 3). The strengths of the associations between certain social and emotional skills and school grades are relatively weak but consistent across age cohorts and subjects and they remain after accounting for gender and socio-economic differences across students. In particular, being intellectually curious and persistent are the social and emotional skills most strongly related to school grades for both 10- and 15-year-olds in all three subjects. To a lesser extent, students who are more assertive and responsible also tend to have better school grades. These findings stress the importance of not only pursuing objectives in the face of difficulties but also to have an intellectual curiosity about a diverse set of topics and to love learning new things.

Fifteen-year-olds who reported being more stress-resistant (relaxed) and sociable have, on average, lower school grades (Figure 2). This does not mean that calmness in face of adversity (a benefit of being stress-resistant) and seeking support from peers are harmful to school achievement. Instead, this finding might be related to the fact that older students who typically have more autonomy than younger students may prioritise their social interactions at the expense of school work. Students who assess themselves as more stress-resistant might also be those who feel more remote from school and school demands. In fact, among the younger cohort, which is typically more supervised by parents and teachers, these relationships are not observed (Figure 3). In other words, younger students may have a less demanding school environment and are surrounded by adults who help them contain and channel their energy and desire to interact socially in ways that do not harm their school performance.

<sup>6</sup> <https://museum.olimpiada.ru/2020-2021/about>

## Figure 2. Average relationship between social and emotional skills, and school performance of 15-year-old students

Coefficients of (standardised) grades in reading, mathematics and the arts on (standardised) scores on social and emotional skills scales (international average)

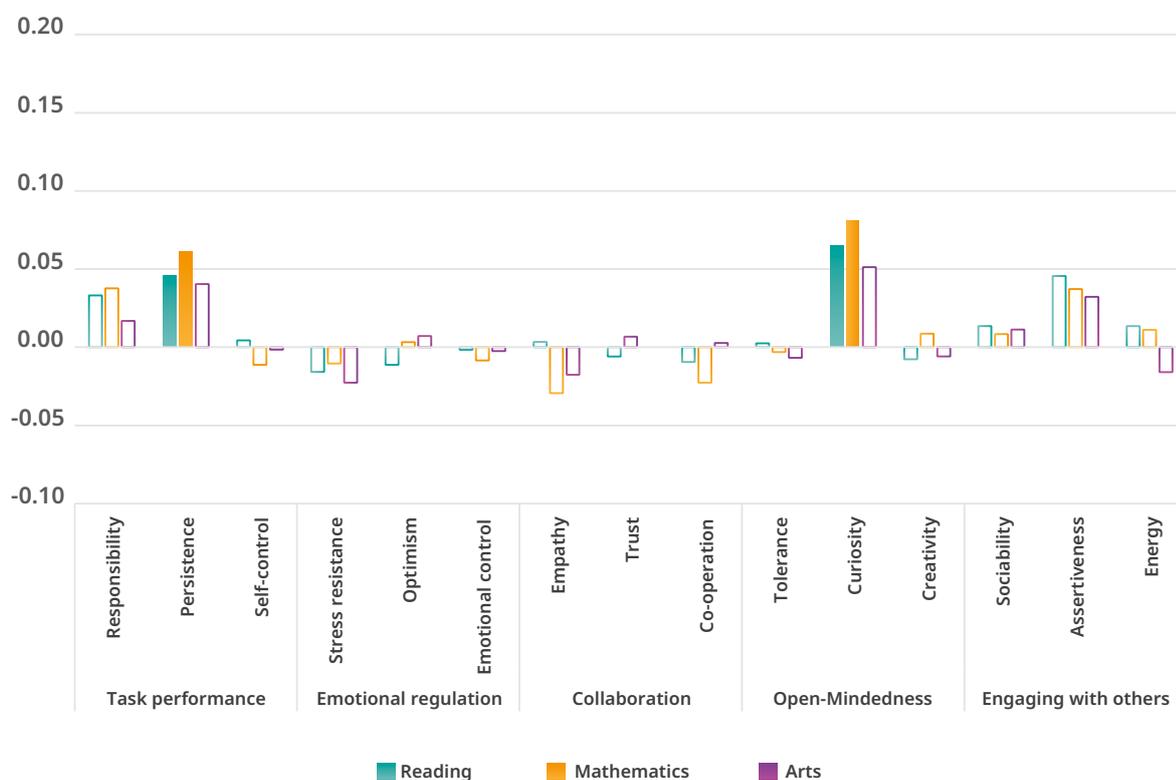


**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages. The regressions are city-specific and control for gender, socio-economic status, and scores in the cognitive ability test, with the exception of Houston (United States), where the cognitive ability test was not administered. Ottawa (Canada) is excluded from the analysis of school grades as students' grades were not available. Coloured bars represent significant differences in at least five cities, bars that are only outlined represent significant differences in fewer than five cities.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figure 2.1.

### Figure 3. Average relationship between social and emotional skills, and school performance of 10-year-old students

Coefficients of (standardised) grades in reading, mathematics and the arts on (standardised) scores on social and emotional skills scales (international average)



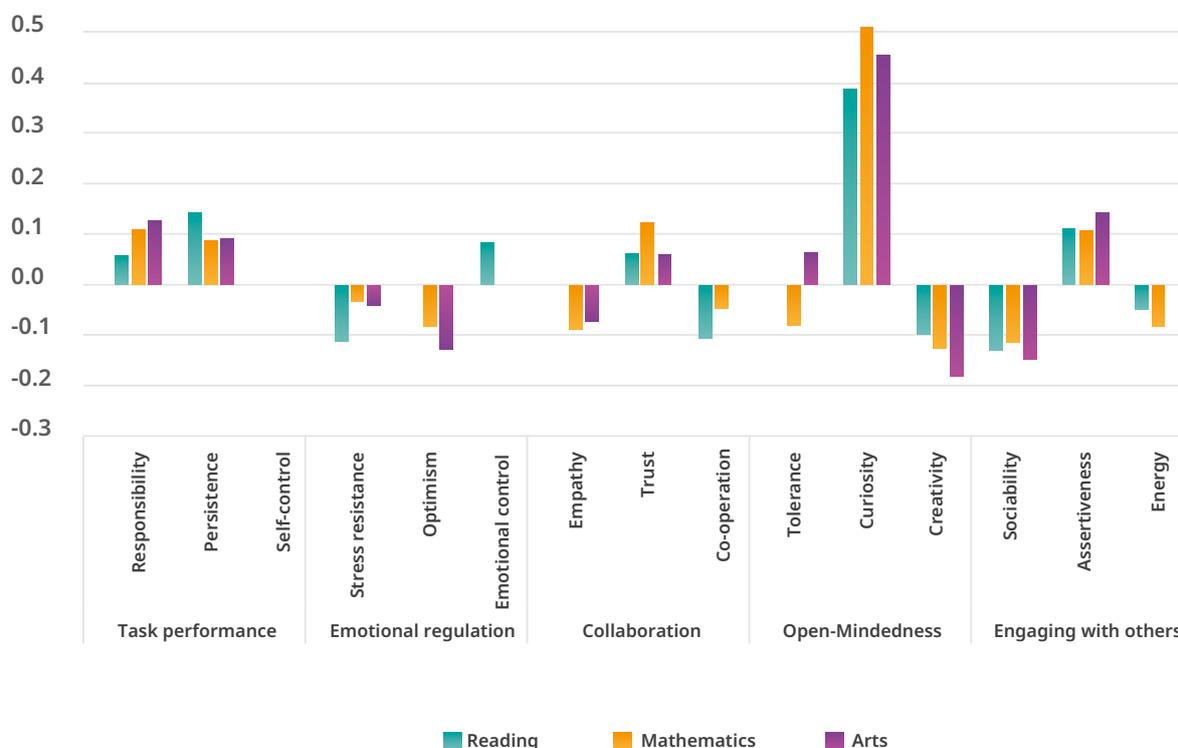
**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages. The regressions are city-specific and control for gender, socio-economic status, and scores in the cognitive ability test, with the exception of Houston (United States), where the cognitive ability test was not administered. Ottawa (Canada) is excluded from the analysis of school grades as students' grades were not available. Coloured bars represent significant differences in at least five cities, bars that are only outlined represent significant differences in fewer than five cities.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figure 2.2.

Figure 4 provides an overview of the social and emotional skills that are most strongly related with students' grades in all three subjects for the city of Moscow (Russia). Being intellectually curious, persistent, assertive, responsible and trusting of others are the social and emotional skills most positively related to school grades for 15-year-olds in the three subjects in SSSES analysis; reading, mathematics and the arts. These findings emphasise the importance of not only dedication in pursuing predetermined goals – even in the face of difficulties – but also cultivating an intellectual curiosity for a diverse range of topics. Students who are curious about a diverse set of topics and love learning new things are better equipped to face difficulties and are more likely to reach their goals. Students who reported being more responsible can create positive and efficient working environments for peers and teachers in both academic work and extracurricular activities. Finally, being assertive helps students develop independent thinking and decision-making skills. This appears conducive to higher school performance.

### Figure 4. Skills most strongly associated with students' performance in Moscow (Russia)

Coefficients of (standardised) grades in reading, mathematics and the arts on (standardised) scores on social and emotional skills scales (international average)



**Note:** Coefficients from regressions of 15-year-olds' (standardised) grades in reading, mathematics and the arts on (standardised) scores on social and emotional skills scales. Each regression controls for gender, socio-economic status, and scores in the cognitive ability test. Only significant and lasso-selected relationships are reported.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Tables A2.1, A2.2, A2.3, A2.4, A2.5 and A2.6.

## Social and emotional skills matter for future educational and occupational outcomes

Adolescence is a period when young people start to prepare for adult life. Teenagers have to make important decisions relevant to their future lives, such as what field of study or type of education they will pursue and what job they will have. But young people often have a distorted perception of their cognitive, social and emotional strengths, which is influenced by their immediate environment more than by objective information; and they may lack sufficient knowledge about the breadth of educational opportunities and careers open to them. Importantly, past research has argued and shown that social and emotional skills are an integral component of individuals' employability, i.e. individuals' capability of getting and keeping fulfilling work (Pool and Sewell, 2007<sup>[5]</sup>).

Education systems can play a crucial role in channelling these skills into the labour market, and helping young people develop a fair assessment of themselves and of their future educational opportunities. In doing so, they can ensure that students' skills, interests and aptitudes find a suitable match in the economy (Musset and Kurekova, 2018<sup>[6]</sup>).

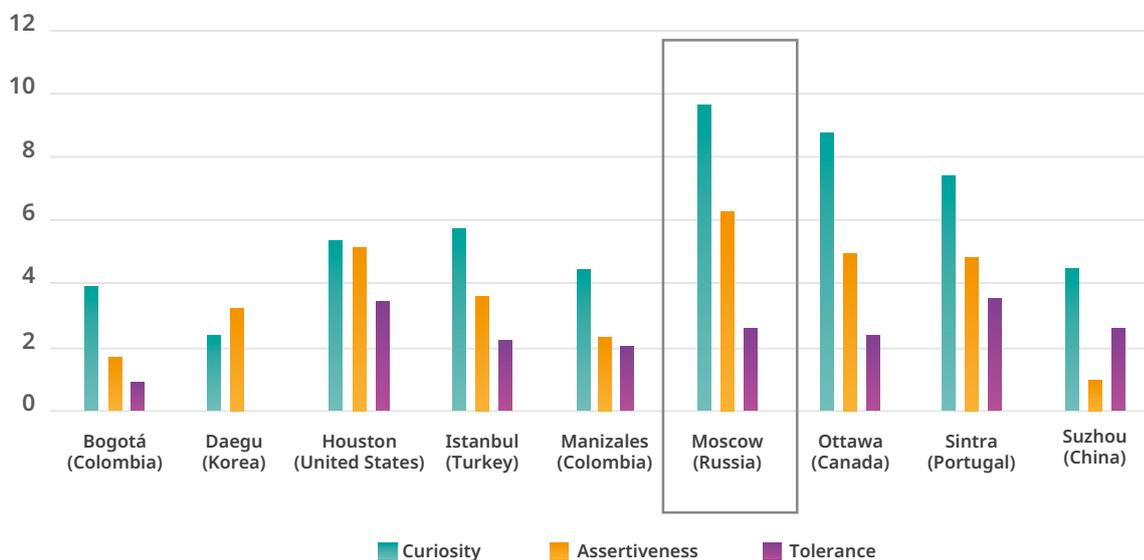
In Moscow (Russia), 77% of 15-year-olds reported that they expected to go on and complete a tertiary degree – a share that is similar to the international average across all SSES-participating cities (79%) and higher than the share of 25- to 34-year-olds who are tertiary-educated in Russia in 2019 (OECD, 2020<sup>[4]</sup>). This suggests that many 15-year-old students in Moscow are realistic while also being ambitious.

Across all SSES-participating cities with available data, the proportion of students who hold high expectations for further education is related to how they portrayed their own social and emotional skills. Among students of similar socio-economic background, differences in education expectations are often related to differences in social and emotional skills. In all participating cities and particularly so in Moscow (Russia), highly intellectually curious students tend to have higher educational expectations. Higher levels of assertiveness and tolerance are also, in Moscow as well as in most cities, associated with expectations of completing higher education (Figure 5). At the same time, creativity, sociability and energy are negatively related to educational expectations in Moscow and a few other cities (Figure 6). All these findings hold while accounting for other skill differences and for differences in gender and socio-economic status.

Why is curiosity strongly and consistently related to expectations for completing tertiary education? This likely reflects the fact that students with a great deal of curiosity and love of learning tend to have positive dispositions not only towards learning, in general, but also towards formal tertiary-education institutions; these students see tertiary institutions such as universities as places where their desire for knowledge can be satisfied. This indicates the importance of cultivating the affective dimensions that support academic performance – and not only behavioural tendencies such as persistence and self-control – in order to prepare students for lifelong learning.

### Figure 5. How curiosity, assertiveness and tolerance relate to expectations of completing tertiary education

Percentage-point change in the likelihood that a 15-year-old student expects to complete a tertiary degree

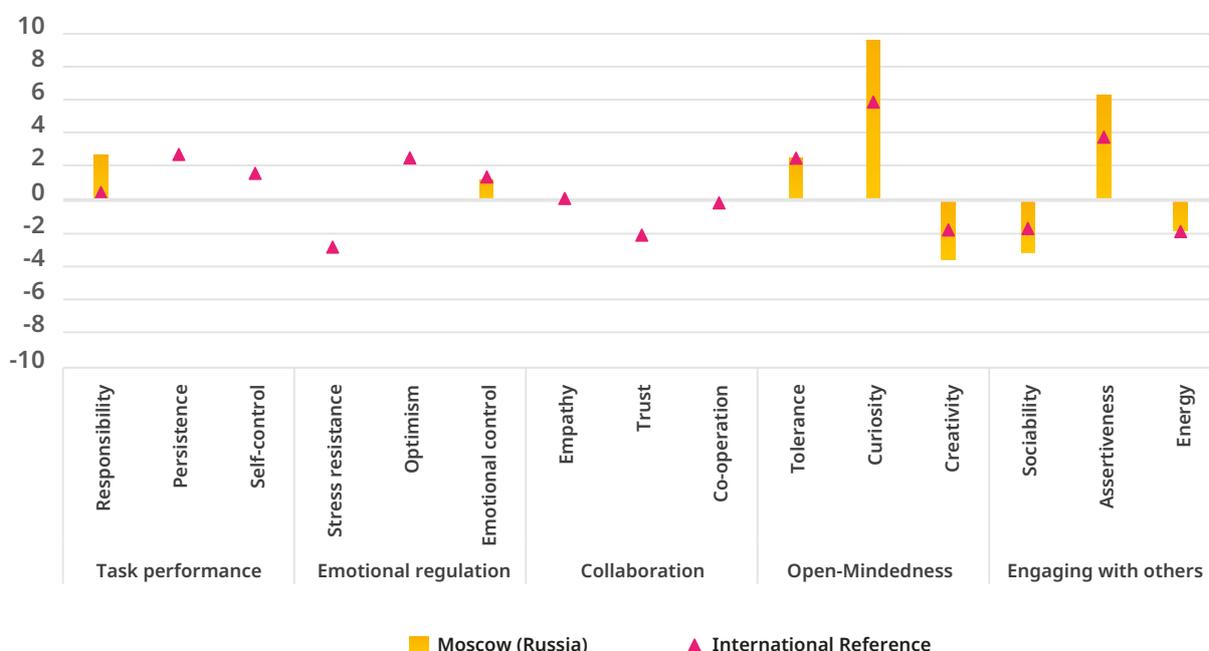


**Note:** The figure shows the percentage-point change in the likelihood that a 15-year-old student expects to complete a tertiary degree that is associated with a 100-point increase in the corresponding skill score (the standard deviation of the score distribution of each skill was set to 100 for the combined dataset with equally weighted city data). Only significant and lasso-selected relationships are reported. All models include controls for socio-economic status and gender. Data for Helsinki (Finland) are not available.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A2.7.

## Figure 6. Skills most strongly associated with expectations of completing tertiary education in Moscow (Russia)

Percentage-point change in the likelihood that a 15-year-old student expects to complete a tertiary degree



**Note:** The figure shows the percentage-point change in the likelihood that a 15-year-old student expects to complete a tertiary degree that is associated with a 100-point increase in the corresponding skill score (the standard deviation of the score distribution of each skill was set to 100 for the combined dataset with equally weighted city data). Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender. Data for Helsinki (Finland) are not available.

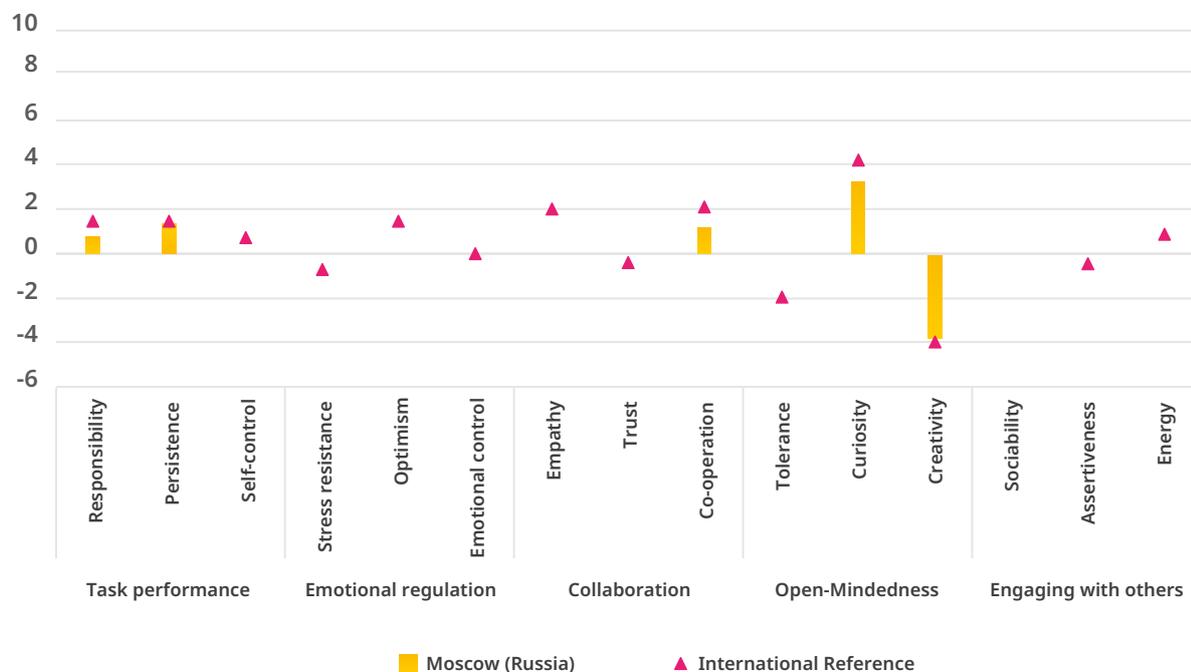
**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A2.7.

Similar to educational expectations, students' occupational expectations are related to specific patterns of social and emotional skills. First, the relations between social and emotional skills, and occupational expectations are much stronger among 15-year-olds than 10-year-olds. This might signal the interdependence of these two factors – students might develop job preferences adapted to their own cognitive, and social and emotional skills at the same time as they improve their skills to meet the requirements of their personal job aspirations.

Looking at 15-year-olds' job expectations, certain patterns of social and emotional skills emerge that are associated with aspirations to work in certain occupational groups. A few exemplar cases illustrate this. For example, in Moscow (Russia), as well as in all other participating cities, 15-year-old students who reported aspiring to become health professionals (i.e. medical doctors, nursing and midwifery professionals) are also more curious than peers aspiring to other occupations (Figure 7). In Moscow and nearly all other cities, these students also represent themselves as less creative than other students. More specific to Moscow is the fact that students aspiring to become health professionals are more curious, persistent, co-operative and, to some extent, responsible. This combination of social and emotional skills is not surprising given that health occupations require curiosity for sciences, interpersonal skills to cater to patients' needs and persistence to address complicated medical cases in an effective manner.

### Figure 7. Skills most strongly associated with expectations of working as health professionals in Moscow (Russia)

Percentage-point change in the likelihood that a 15-year-old student expects to become a health professional



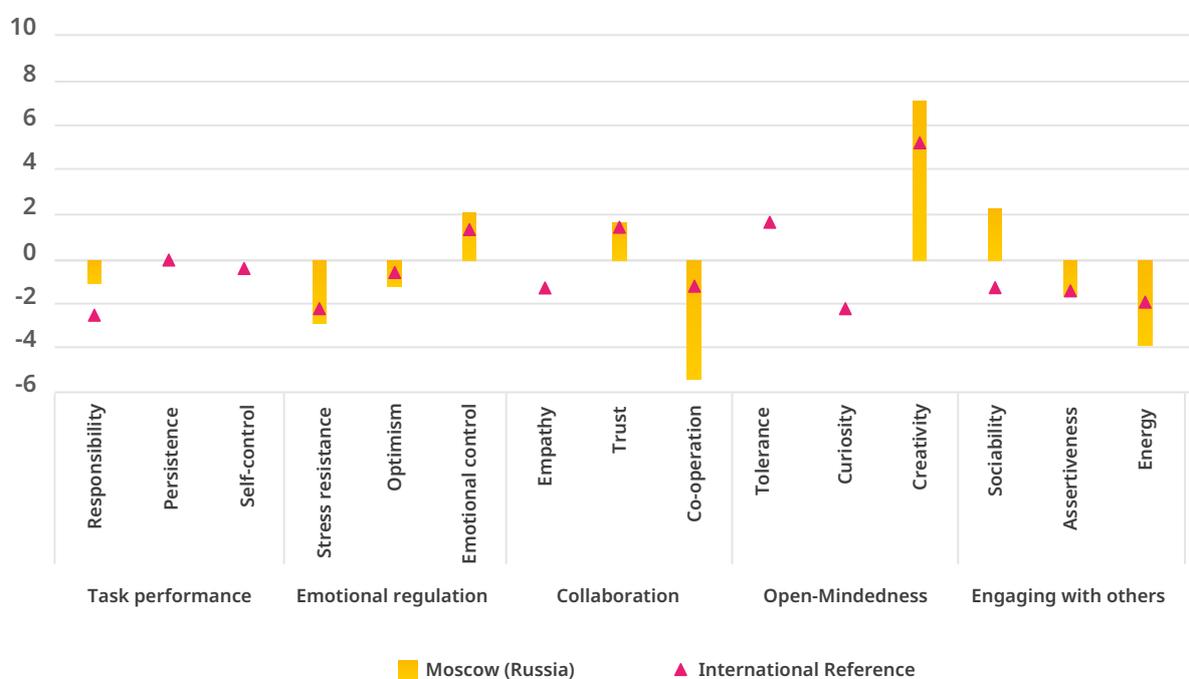
**Note:** The figure shows the percentage-point change in the likelihood that a 15-year-old student expects to become a health professional that is associated with a 100-point increase in the corresponding skill score (the standard deviation of the score distribution of each skill was set to 100 for the combined dataset with equally weighted city data). Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender.

**Source:** Adapted from OECD (2021), Beyond Academic Learning. *First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A2.8.

In all cities including Moscow (Russia), students expecting to work in a creative occupation also represent themselves as more creative (Figure 8). Creative occupations include, for example, artists, musicians, actors but also marketing directors, professionals and associate professionals, architects, journalists, public relations officers, and software professionals. In Moscow, students expecting to pursue a creative occupation tend to be less co-operative. Additionally, they tend to be less resistant to stress and less energetic compared to the rest of the students.

## Figure 8. Skills most strongly associated with expectations of working in a creative occupation In Moscow (Russia)

Percentage-point change in the likelihood that a 15-year-old student expects to work in a creative occupation



**Note:** The figure shows the percentage-point change in the likelihood that a 15-year-old student expects to work in a creative occupation that is associated with a 100-point increase in the corresponding skill score (the standard deviation of the score distribution of each skill was set to 100 for the combined dataset with equally weighted city data). Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A4.20.

## Social and emotional skills matter for well-being

Well-being is an important measure of quality of life alongside other social and economic dimensions (OECD, 2013<sup>[7]</sup>). Adolescence is a period of rapid physical growth and brain development, increasing demands and expectations regarding school performance, changing relationships with parents and peers as well as increasing autonomy as students start to make their own decisions and develop behaviours that can influence their current and future well-being (Inchley et al., 2020<sup>[8]</sup>; Patton, 2016<sup>[9]</sup>). Education policies increasingly address student well-being as part of a whole-child perspective to education. This has led to increased emphasis on social and emotional skills alongside cognitive skills as drivers of future well-being.

The three aspects of students' psychological well-being measured in the SSES (life satisfaction, current psychological well-being and test anxiety) are strongly related to skills in the domain of emotional regulation: stress resistance, optimism and emotional control. All three aspects of students' psychological well-being are also only weakly related to skills in the domains of task performance and engaging with others.

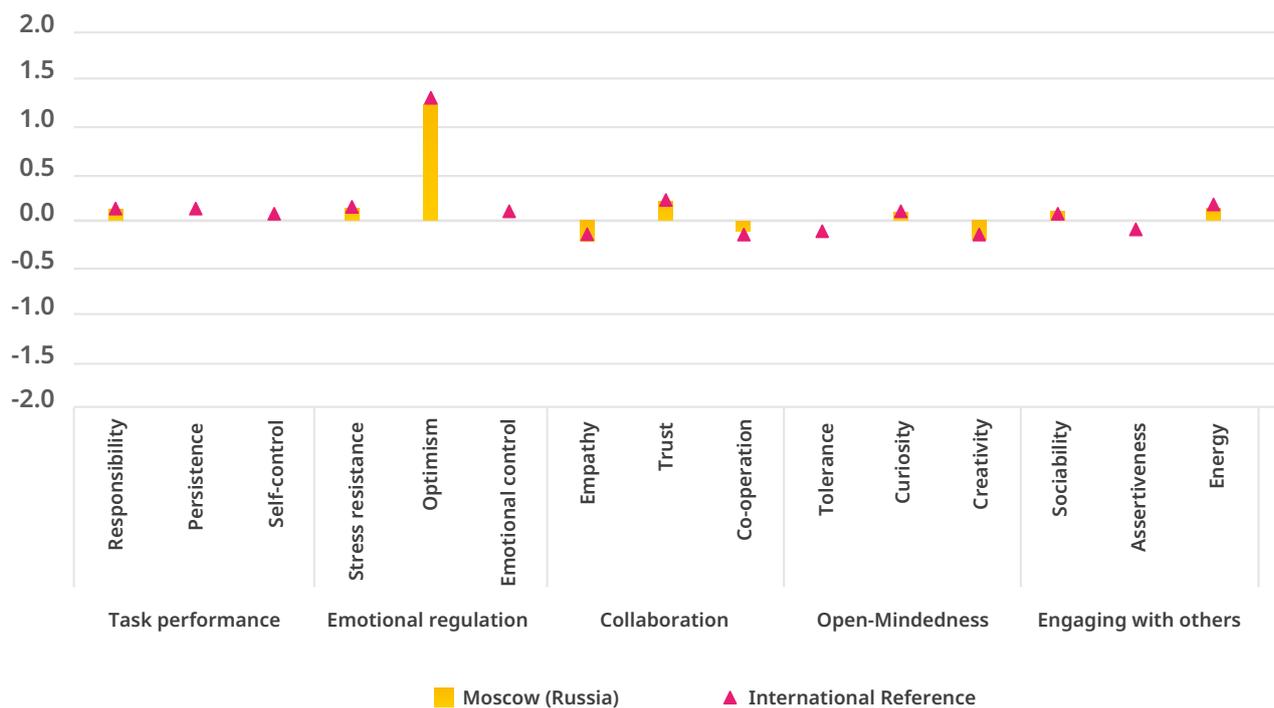
## Life satisfaction

Students' life satisfaction is an evaluation that students make of their perceived quality of life according to their chosen criteria. This can be determined in part by the student's current mood and memory, and by the immediate context. In Moscow (Russia) and in all other participating cities, 15-year-old students who are more optimistic also reported higher levels of life satisfaction (Figure 9). This also holds true for 10-year-old students. Students who are optimistic have a positive attitude and favourable outlook towards life. At the same time, students who have a more privileged life might be more optimistic. Most importantly, higher levels of optimism are inversely related to depressive disorders. Optimism confers resilience and coping skills in dealing with stressful events, and is related to factors such as socio-economic status and social integration, which generally have protective effects for both psychological and physical well-being (Carver, Scheier and Segerstrom, 2010<sup>[10]</sup>).

Some other social and emotional skills are found to be positively related to students' life satisfaction in Moscow (Russia) but to a much lesser extent than optimism. Curiosity and sociability are the two social and emotional skills that are positively related to students' life satisfaction, irrespective of student age (10 or 15) while empathy is the sole skill that is negatively related.

**Figure 9. Skills most strongly associated with students' life satisfaction**

Change in 15-years-olds' life satisfaction associated with changes in social and emotional skills



**Note:** The figure shows coefficients from a regression of students' life satisfaction on (standardised) scores on social and emotional skill scales. Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender.

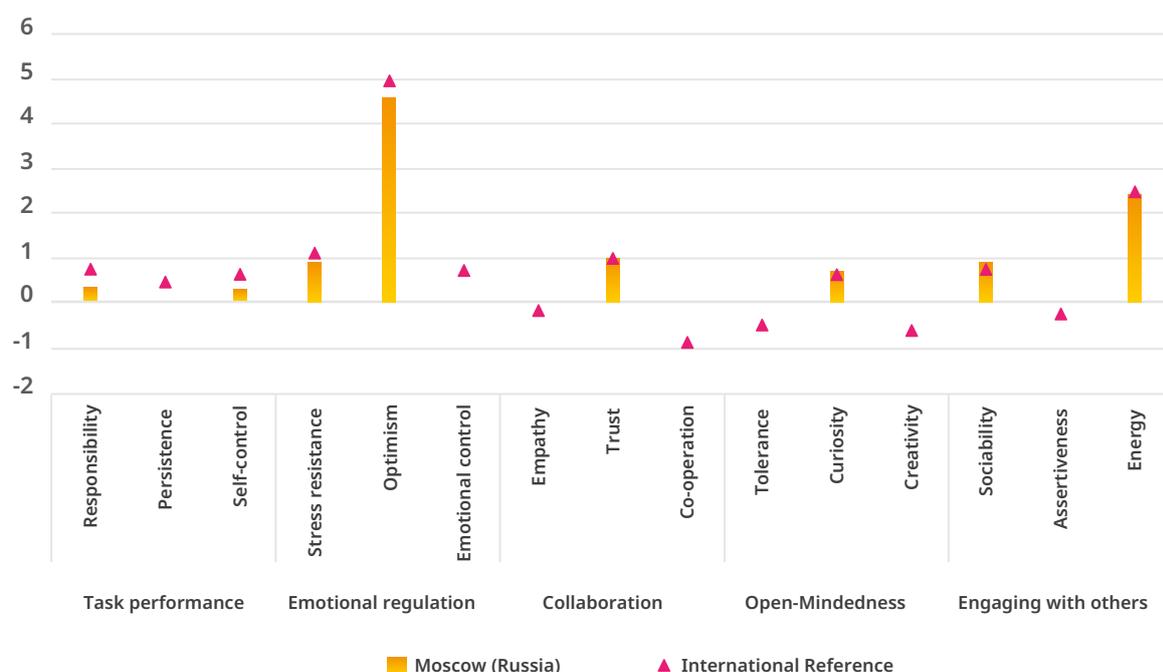
**Source:** Adapted from OECD (2021), Beyond Academic Learning. *First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A3.18.

## Current psychological well-being

Students' current psychological well-being is an evaluation of students' feelings and experiences during the two weeks prior to the survey. In Moscow (Russia) and in all other participating cities, being optimistic is strongly related to one's current psychological well-being (Figure 10). This holds true for both cohorts of students. In addition, both 10- and 15-year-olds students' current psychological well-being in Moscow is strongly related to their levels of energy. Students who are more optimistic generally respond differently to challenging situations than students who are less optimistic. Optimists are more likely to experience less distress than pessimists when dealing with difficulties in their lives (Scheier, Carver and Bridges, 2004<sup>[11]</sup>). This is not necessarily because optimists have unrealistic expectations (though that may sometimes be the case) but because they have more coping strategies to deal with challenging situations. Thinking that things will only get worse – even if true – may disengage someone from confronting a situation while thinking that things can improve – even if false – may motivate them to get the best out of a given situation.

**Figure 10. Skills most strongly associated with students' current psychological well-being in Moscow (Russia)**

Change in 15-year-olds' current psychological well-being associated with changes in social and emotional skills



**Note:** The figure shows coefficients from regressions of students' current psychological well-being on (standardised) scores on social and emotional skill scales. Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender.

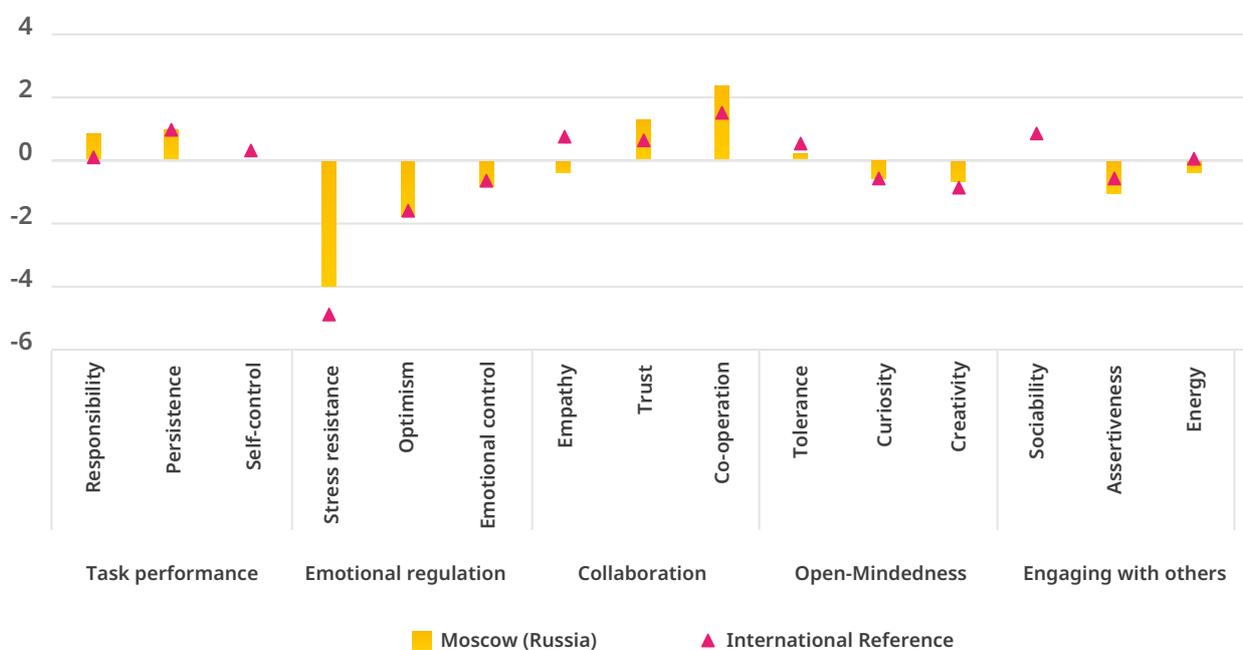
**Source:** Adapted from OECD (2021), Beyond Academic Learning. *First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A3.19.

## Test anxiety

Test anxiety can be described as “the set of phenomenological, physiological, and behavioural responses that accompany concern about possible negative consequences or failure in an evaluative situation” (Zeidner, 2007<sup>[12]</sup>). It typically arises in educational settings where students believe their abilities are stretched or exceeded by the demands of the test situation. In Moscow (Russia) and in all participating cities with available data, students who indicated higher stress resistance reported a lower level of test anxiety. This holds true for students aged 10 and 15 while accounting for students’ grades in both mathematics and reading, which are typically correlated with a lower level of test anxiety (Figure 11). Among 10- and 15-year-olds, higher levels of optimism, creativity and emotional control are also related to lower levels of test anxiety in quite a few cities. However, in Moscow, the skill that is most significantly (positively) associated with test anxiety next to optimism is co-operation, irrespective of student age. In addition, students, who are more persistent and trusting and have a higher sense of responsibility, exhibit higher levels of test anxiety.

**Figure 11. Skills most strongly associated with test anxiety in Moscow (Russia)**

Change in 15-year-olds’ test anxiety associated with changes in social and emotional skills



**Note:** The figure shows coefficients from a regression of students’ test anxiety on (standardised) scores on social and emotional skill scales. Only significant and lasso-selected relationships are reported. The international reference is the arithmetic average of the coefficients across the cities with significant and lasso-selected relationships only. All models include controls for socio-economic status and gender.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A3.20.

## Students' social and emotional skills are related to students' background characteristics...

SSES data and past research show that students' social and emotional skills are important for students' academic success, employment outcomes and well-being as well as for the prosperity of societies in general. The United Nations Sustainable Development Goals (SDGs) Target 4.7 advocates:

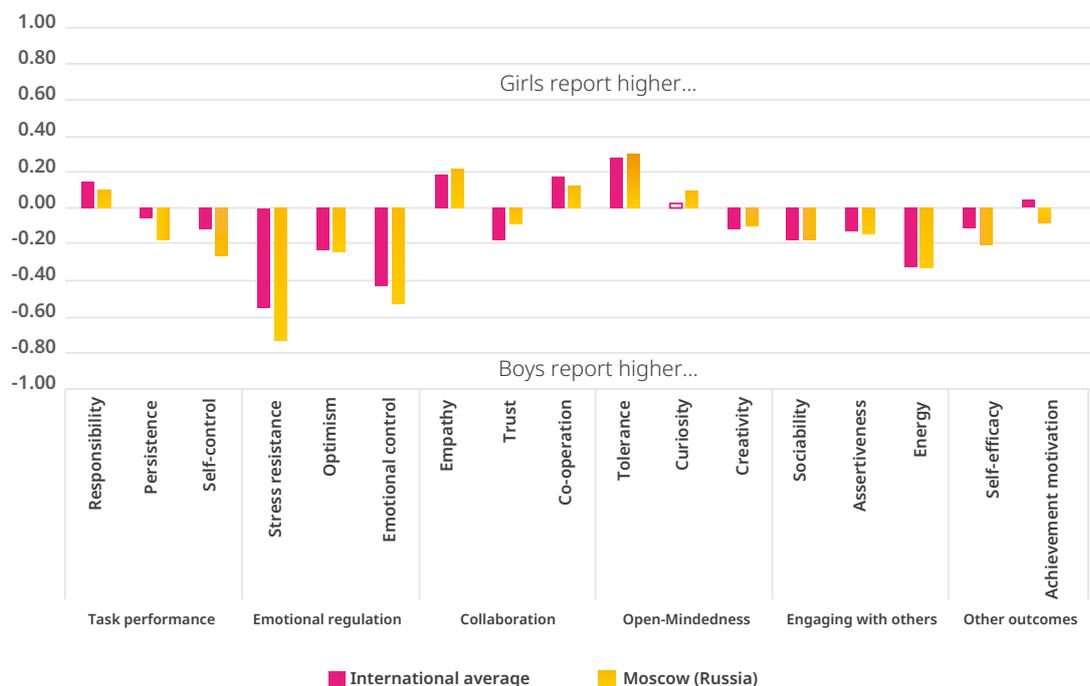
*“ensuring that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development”.*

In this context, social and emotional skills such as co-operation, empathy and tolerance are key for citizens and societies to achieve these goals and secure the basis for functioning democracies. However, students with different background characteristics tend to possess different combinations of social and emotional skills.

In Moscow (Russia) as on average across participating cities, 15-year-old boys exhibit higher skills in the domains of emotional regulation (stress resistance, optimism and emotional control) and engaging with others (sociability, assertiveness, energy). Likewise, 15-year-old girls exhibit higher levels of responsibility, empathy, co-operation and tolerance. Overall, gender differences in 15-year-olds' social and emotional skills seem more pronounced in Moscow than on average across the participating cities, with large differences in self-control, stress resistance and emotional control. In addition, both in Moscow and on average across cities, gender differences in students' social and emotional skills seem to increase with age as they tend to be more pronounced among 15-year-olds than 10-year-olds (Figure 12).

**Figure 12. Gender differences in social and emotional skills**

Standardised gender differences in skill scores (15-year-old girls – 15-year-old boys)



Standardised gender differences in skill scores (10-year-old girls – 10-year-old boys)



**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages. The figures report standardised differences, whereby the raw scale points have been divided by the (city-specific) standard deviation. Significant differences are coloured, non-significant differences are outlined.

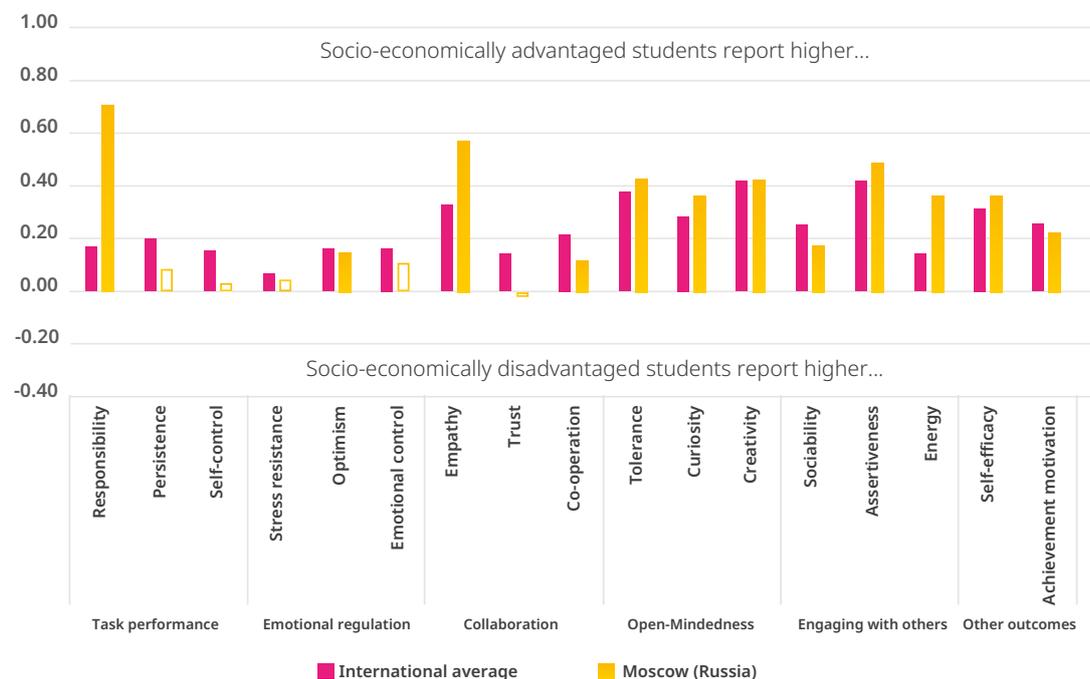
**Source:** Adapted from OECD (2021), Beyond Academic Learning. *First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Tables A1.4, A1.5. and Figure 1.3.

On average across participating cities, socio-economically advantaged students exhibit higher levels on every social and emotional skill measured by SSES. The difference in skills between students with low or high socio-economic status is especially pronounced in skills related to the domain of open-mindedness such as tolerance, curiosity, and creativity, as well as empathy, assertiveness and self-efficacy. The differences in skills between students with low or high socio-economic status are smallest in the domains of task performance and emotional regulation. In Moscow and on average across cities, socio-economic differences in students' social and emotional skills tend to decrease between the ages of 10 and 15 (Figure 13). Actually, socio-economic differences are no longer significant for the skills of persistence, self-control, stress resistance, emotional control and trust among the older cohort.

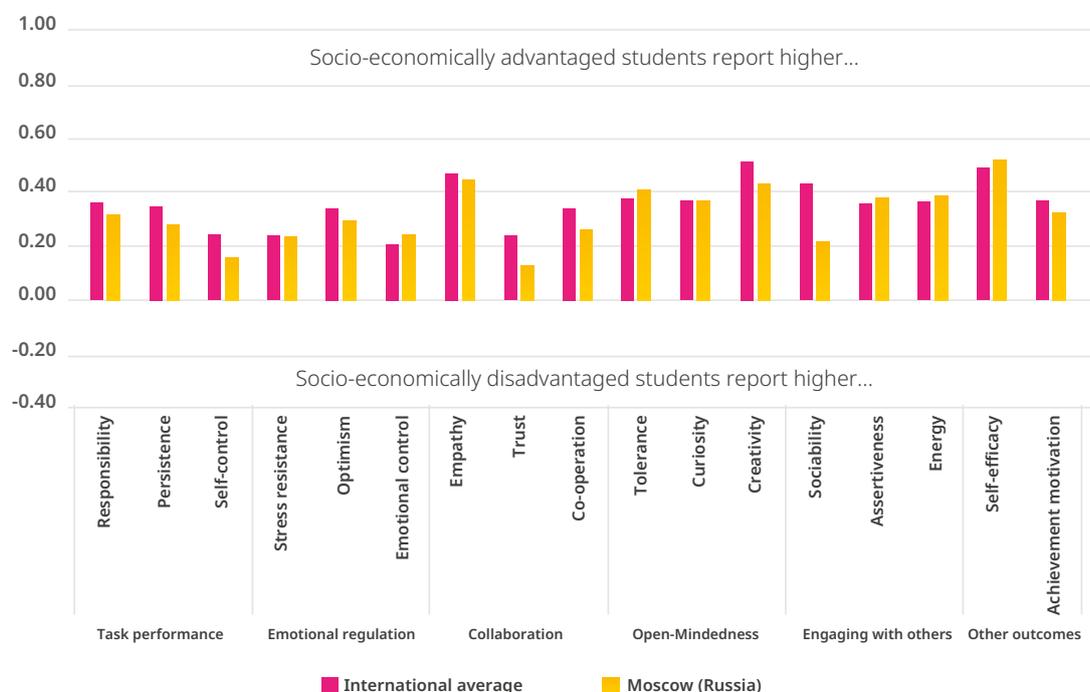
In Moscow (Russia), unlike in most of the other participating cities, there are no significant differences between the social and emotional skills of migrant and native-born students across all domains measured in SSES.

**Figure 13. Differences in social and emotional skills by socio-economic status**

Standardised differences in skill scores (high socio-economic status – low socio-economic status) among 15-year-olds



Standardised differences in skill scores (high socio-economic status – low socio-economic status) among 10-year-olds



**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages. Socio-economically advantaged students are those in the top quarter of the city-specific distribution of the index of socio-economic status. Socio-economically disadvantaged students are in the bottom quarter of the city-specific distribution of the index of socio-economic status. The figures report standardised differences, whereby the raw scale points have been divided by the (city-specific) standard deviation. Significant differences are coloured, non-significant differences are outlined.

**Source:** Adapted from OECD (2021), Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figures 1.8. and 1.9.

## ... But students' social and emotional skills are malleable...

Inequalities in social and emotional skills among students are not set in stone. SSES data as well as previous research support the notion that social and emotional skills are characteristics and abilities that are malleable and change with biological and psychological maturation, environmental influences, individual effort and important life events (Specht et al., 2014<sup>[13]</sup>; Kankaraš and Suarez-Alvarez, 2019<sup>[11]</sup>; OECD, 2015<sup>[14]</sup>; Roberts, Walton and Viechtbauer, 2006<sup>[15]</sup>).

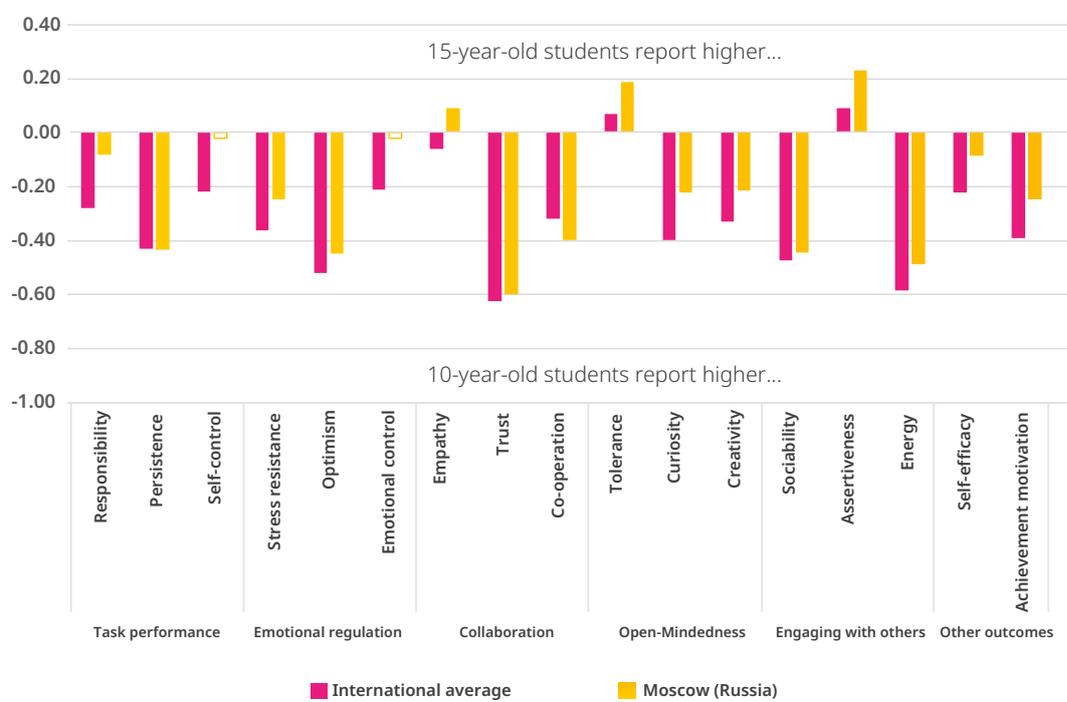
In Moscow (Russia) and on average across participating cities, 15-year-olds exhibit lower levels of the social and emotional skills included in SSES than 10-year-olds. The differences are particularly pronounced when it comes to optimism, trust, energy and sociability. Tolerance and assertiveness are the only two skills that are reportedly higher among 15-year-olds than 10-year-olds on average across cities. Fifteen-year-olds in Moscow also reported being more empathetic than their younger counterparts. This might be because teachers and schools are usually more effective at developing these skills. Instruction in citizenship and citizen rights may enhance tolerant attitudes among students. School assignments like oral presentations and written essays may encourage students to develop more assertiveness. In addition, 15-year-olds in Moscow exhibit lower levels of creativity and curiosity than 10-year-olds but similar levels of emotional and self-control. The longer one spends in school with its fixed learning environments, the more students' abilities to build and practice self-regulation skills, interpersonal skills and creativity and curiosity may become inhibited.

Overall, age-related differences in students' social and emotional skills in Moscow (Russia) tend to be a bit smaller than on average across cities. Yet, in Moscow, between the ages of 10 and 15, the level of co-operation among students drops more substantially than in most of the other participating cities (Figure 14).

The dip in students' social and emotional skills as students age is not uniform for all types of students. In particular, the decline is more acute for socio-economically advantaged students, or in other words, less pronounced for socio-economically disadvantaged students.

### Figure 14. Age differences in social and emotional skills

Differences (15-year-olds – 10-year-olds) in social and emotional skills



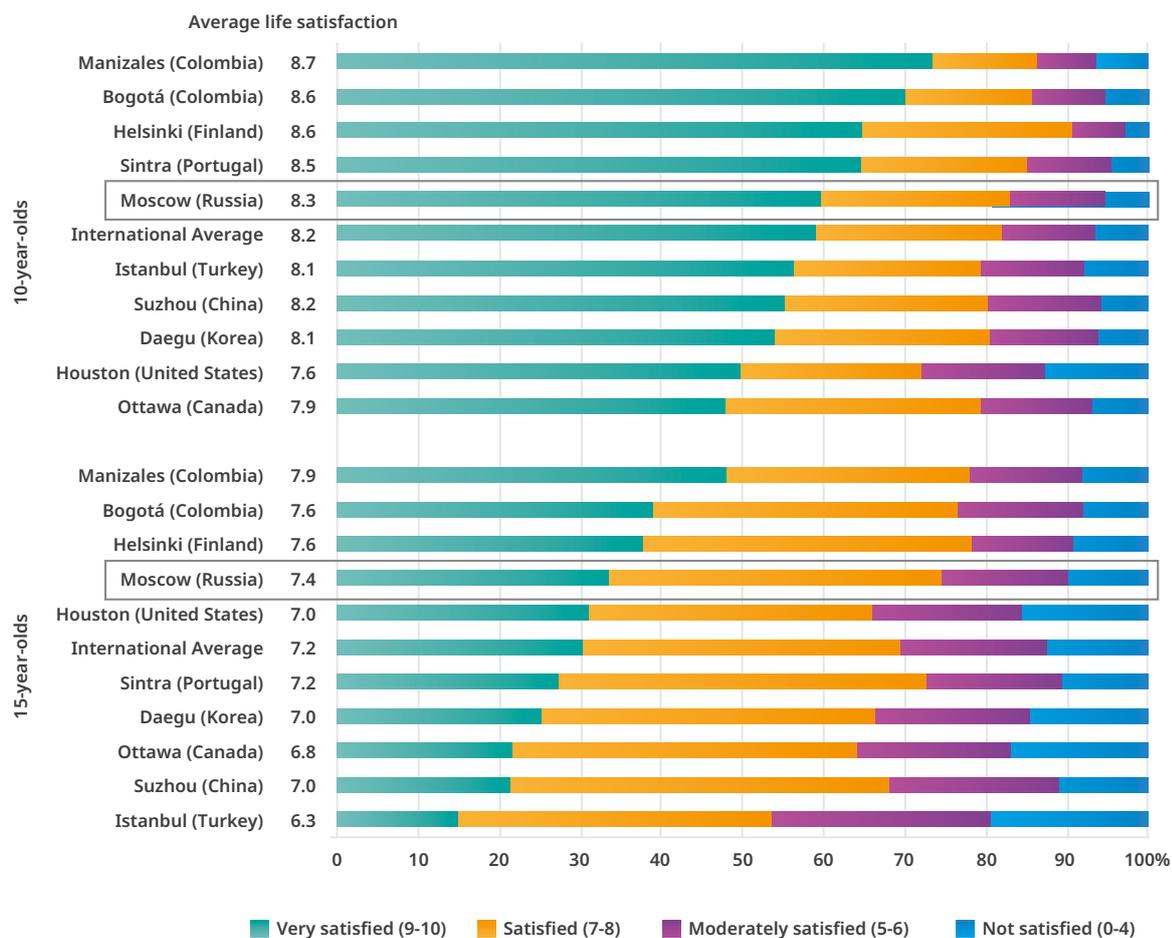
**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages. The figure reports standardised differences, whereby the raw scale points have been divided by the (city-specific) standard deviation. Significant differences are coloured, non-significant differences are outlined.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figure 1.3.

Important age-related differences are also observed in other key outcomes examined in SSES. SSES data show that 10-year-old students enjoy higher levels of psychological well-being than 15-year-olds. Life satisfaction and current psychological well-being dip as students get older. Figure 15 shows, for example, that the share of students who reported being very satisfied with their life in Moscow (Russia) goes from nearly 60% among 10-year-olds down to slightly more than 33% among 15-year-olds. This pattern is generally more pronounced among girls than boys.

**Figure 15. Students' life satisfaction, by age cohort and city**

Percentage of students, by level of life satisfaction



**Note:** Cities are ranked in descending order of the percentage of students who reported being very satisfied with their life.

Data for Sintra (Portugal) did not reach student response rate standards.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figure 3.1.

Students' educational and occupational expectations also change as they get older. In particular, older students embrace more diverse occupational expectations than their younger peers. On average across cities, 48% of 10-year-olds expect to work in one of the 10 most frequently reported occupations for their age cohort. This goes down to 37% for 15-year-old students. In addition, the relation between students' social and emotional skills, and their occupational expectations is much stronger for 15-year-olds than 10-year-olds. This suggests reciprocal influence between students' social and emotional skills, and their occupational aspirations.

## ...And students' social and emotional skills can be influenced by the school environment

The malleability of social and emotional skills enables them to be modified or developed for the better. Schools can play a particularly important role in providing learning environments where skills can be developed, enhanced and reinforced through practice and daily experiences. There are a number of studies that look at the effect of different school-based interventions to enhance students' social and emotional learning (Durlak et al., 2011<sup>[16]</sup>; Park et al., 2008<sup>[17]</sup>; Sklad et al., 2012<sup>[18]</sup>; Smithers et al., 2018<sup>[19]</sup>). A meta-analysis by Durlak et al. (2011<sup>[16]</sup>) shows that social and emotional learning programmes had significant positive effects on targeted social and emotional skills, and attitudes about self, others and school. They increased pro-social behaviour, reduced behavioural problems and improved school performance. A more recent meta-analysis of quality research studies (comprising randomised experimental, quasi-experimental intervention studies and observational studies, controlling for relevant confounding factors) by Smithers et al. (2018<sup>[19]</sup>) found that interventions aiming to improve social and emotional skills had more obvious positive effects on academic achievement outcomes than on psychological, cognitive, language and health outcomes. These findings suggest that people are not born with a fixed set of social and emotional skills. Instead, there is considerable potential in developing these skills throughout people's lives (Helson et al., 2002<sup>[20]</sup>; Srivastava et al., 2003<sup>[21]</sup>). Studies linking data on teachers and students show that teachers have an impact on students' social and emotional skills. Teachers' interactions with students, classroom organisation, and emphasis on critical thinking in specific subjects were found to support students' development in areas beyond their core academic skills (Blazar and Kraft, 2017<sup>[22]</sup>).

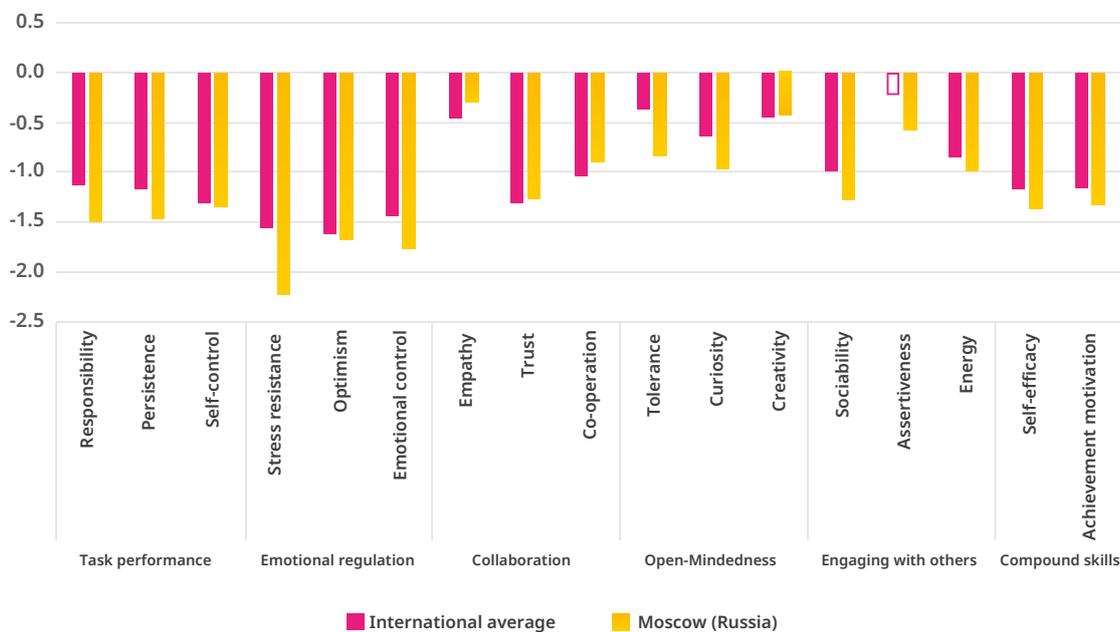
SSES data shed light on teachers' and schools' roles in shaping students' social and emotional skills. A first illustration of this is that students with a greater sense of school belonging and better relations with teachers reported higher social and emotional skills. This holds true for Moscow (Russia) and for all other participating cities. Fitting in at school is most strongly related to higher co-operation, optimism and sociability. At the same time, students who reported having positive relations with their teachers also view themselves as more optimistic, curious and achievement-focused. These findings suggest that schools that are able to provide a positive disciplinary climate, offer support from teachers and engage with parents in building a positive school culture can help students develop their social and emotional skills. Indeed, all these factors are positively associated with students' sense of belonging at school by other research studies (Allen et al., 2018<sup>[23]</sup>; Crouch, Keys and McMahon, 2014<sup>[24]</sup>; Dotterer, McHale and Crouter, 2007<sup>[25]</sup>; Ma, 2003<sup>[26]</sup>; OECD, 2017<sup>[27]</sup>; Shochet, Smyth and Homel, 2007<sup>[28]</sup>).

Secondly, school climate and anti-bullying policies can be instrumental to students' positive social and emotional development. Bullying at school can affect any schoolchild in any country (Nansel et al., 2004<sup>[29]</sup>). This violent behaviour can have severe long-term physical, social and emotional consequences for students. Teachers, parents, policy makers and the media are increasingly drawing attention to bullying and trying to find ways to tackle it (Phillips, 2007<sup>[30]</sup>). A Korean study established that being bullied in middle school causes the onset of symptoms of psychopathologic behaviours to resurface later (Kim, Leventhal and Koh, 2006<sup>[31]</sup>). Yet, research suggests that a supportive and caring school environment is linked to less bullying and, conversely, students' willingness to seek help (Låftman, Östberg and Modin, 2017<sup>[32]</sup>; Ma, 2002<sup>[33]</sup>; Olweus, 2012<sup>[34]</sup>). In schools where students perceive greater fairness; feel they fit in at school; work in a more disciplined, structured and co-operative environment; and have understanding teachers, students are less likely to engage in risky and violent behaviour (Gottfredson et al., 2005<sup>[35]</sup>; Kuperminc, Leadbeater and Blatt, 2001<sup>[36]</sup>).

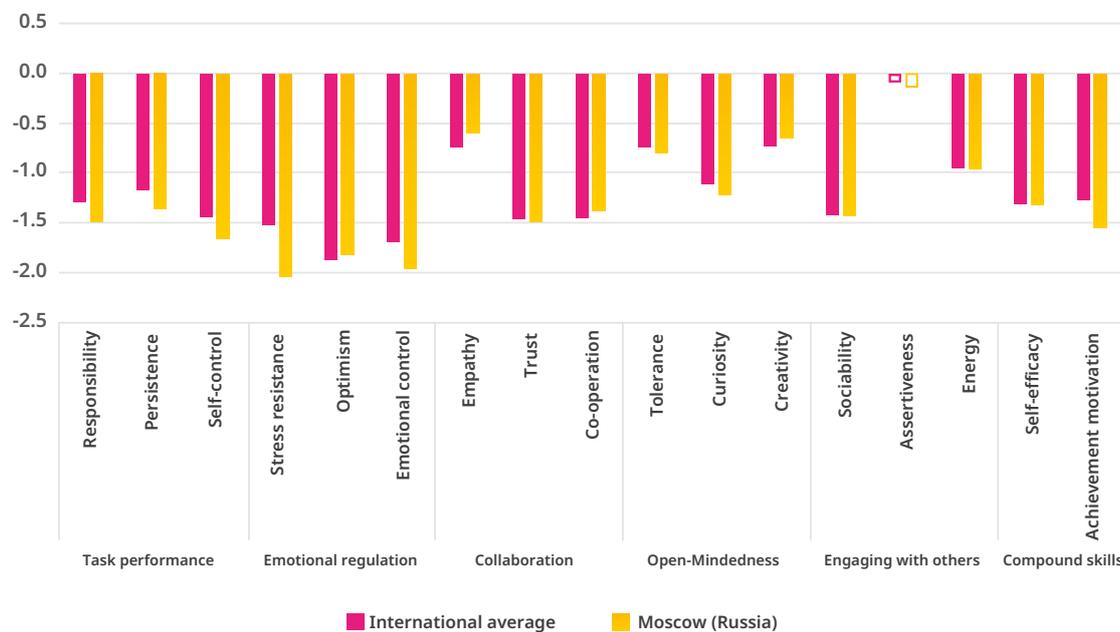
SSES data show that students' exposure to bullying is negatively related to almost all social and emotional skills. In Moscow (Russia) as well as on average across participating cities, 10-year-old and 15-year-old students' exposure to bullying is most strongly related to lower skills in the domains of emotional regulation. Students who reported greater exposure to bullying tended to report lower levels of optimism, emotional control, stress resistance, and trust in other people (Figure 16). These findings are particularly worrying as, in Moscow, 25% of 10-year-old students and 14% of 15-year-old students have experienced bullying at least a few times a month or more during the 12 months prior to the 2019 survey.

**Figure 16. Relations between students' exposure to bullying, and social and emotional skills**

Change in 15-year-olds' social and emotional skills related to a one-standard deviation increase in exposure to bullying



Change in 10-year-olds' social and emotional skills related to a one-standard deviation increase in exposure to bullying



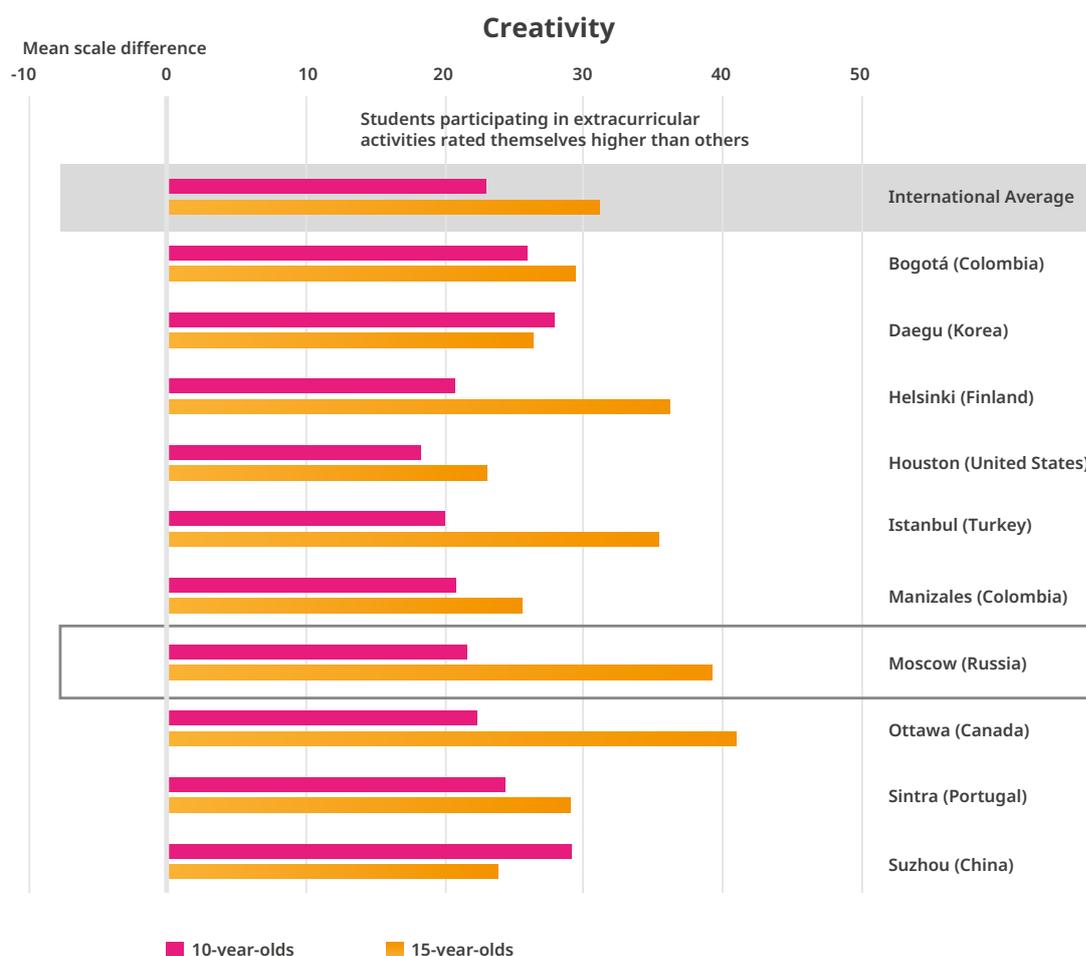
**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in the international average. Control variables include gender, socio-economic status and immigration background. Significant differences are coloured, non-significant differences are outlined. **Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Table A5.17.

A third area where schools could make a difference in the holistic development of their students is in organising informal activities. Extracurricular activities at school do not only have an academic focus, they usually aim to achieve a broader set of goals such as physical exercise and health; developing creativity and practice or appreciation of the arts; and encouraging volunteering and involvement with the community. Participation in extracurricular activities can also help students develop social and emotional skills (Farb and Matjasko, 2012<sup>[37]</sup>).

SSES data show that, in Moscow (Russia) as well as in almost all participating cities, students who participate in after-school arts activities reported higher levels of creativity, particularly among 15-year-olds (Figure 17). This holds true even after accounting for differences in socio-economic status and gender among students. Differences in creativity levels between students who participate in arts activities and those who do not are particularly strong in Moscow compared to other cities, especially among 15-year-olds. In Moscow, 56% of 10-year-old students participate in extracurricular art activities outside of school (e.g. playing a musical instrument, dancing, drawing, etc.) – a share that drops down to 51% among 15-year-old students. The pattern of declining participation in art activities as students age combined with wider differences in creativity levels suggests that students who think of themselves as not creative are more likely to discontinue their participation in arts activities during adolescence. Conversely, it is possible that sustained participation in art activities helps students build confidence in their creativity. While the nature of SSES data does not allow us to identify the direction of causality, the data suggest a strong association between arts activities at age 15 and creativity.

**Figure 17. How participation in art activities relates to creativity**

Mean scale differences after accounting for socio-economic status and gender



**Note:** Data for Sintra (Portugal) did not reach student response rate standards and are not included in international averages.

**Source:** Adapted from OECD (2021), *Beyond Academic Learning. First Results from the Survey on Social and Emotional Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/92a11084-en>, Figure 4.9.

### **Box 3. Key features of the OECD's Survey on Social and Emotional Skills (SSES)**

#### **Target populations and samples**

The SSES took a single snapshot of two cohorts of primary and secondary school students, at ages 10 and 15. A sample of around 3 000 students was drawn for each of the two age groups in each participating city. The sample design consisted of creating an initial random sample of schools, followed by a random selection of students within sampled schools.

Ten cities participated in the first round of SSES in 2019: Bogotá (Colombia), Daegu (Korea), Helsinki (Finland), Houston (United States), Istanbul (Turkey), Manizales (Colombia), Moscow (Russia), Ottawa (Canada), Sintra (Portugal) and Suzhou (China).

In Moscow (Russia), the school samples for both cohorts were drawn from the mother populations of more than 500 state schools and more than 100 private schools.

#### **Survey instruments**

SSES assessed students' social and emotional skills directly but also obtained information from their parents, teachers and school principals.

SSES's assessment instruments are self- (student) and others' (parents and teachers) reports on assessed students' typical behaviours, thoughts and feelings. Questions/items are in the form of simple statements such as "I like learning new things" (item assessing students' curiosity) and "I stay calm even in tense situations" (item assessing stress resistance). A 5-point Likert-type agree/disagree response scale was used with answers ranging from 1 – completely disagree to 5 – completely agree. All of the 15 assessment scales used positively and negatively worded items.

These methods are used the most frequently in social and emotional skills assessments. They provide a simple and efficient way to collect information from a large number of respondents, are cost-efficient, simple to administer and tend to produce consistent results.

SSES also collected information on students' and their parents' background characteristics as well as family, school, and community learning contexts through four contextual questionnaires developed for: students, parents, teachers and school principals.

SSES data of all participating cities were complemented with information on students' school grades (except in Ottawa [Canada]) and students' scores via a short cognitive test (except in Houston [United States] and Ottawa [Canada]).

#### **Administration mode**

The students filled out the questionnaires online through desktop or laptop devices. A trained study administrator delivered the survey with school staff present. Parents, teachers and school principals also filled out questionnaires online but in some participating cities, parents could choose a paper and pencil option in case of necessity or personal preference. All instruments were provided using a centrally managed online platform.

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