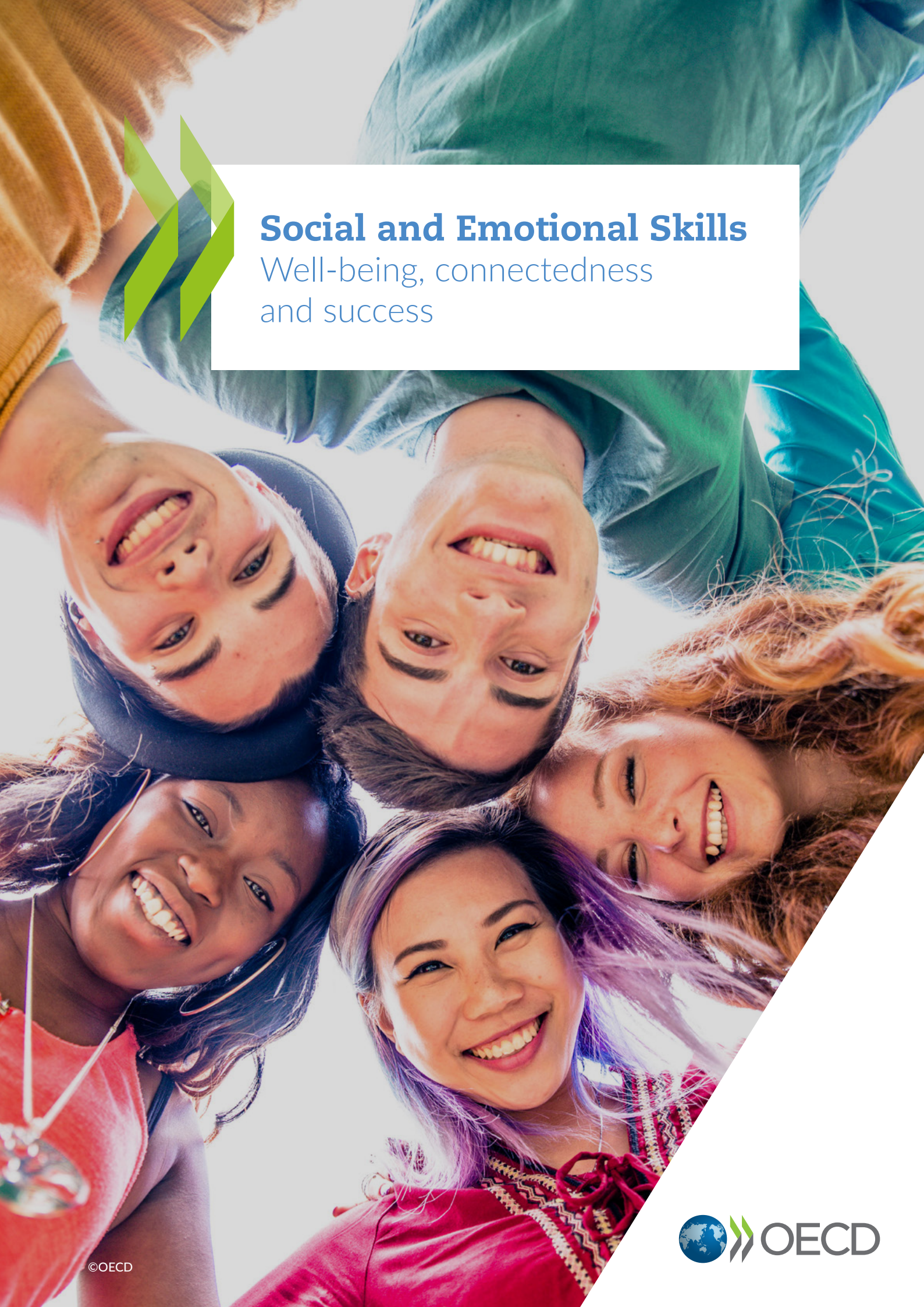
Social and Emotional Skills

Well-being, connectedness and success



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Foreword

Education systems need to prepare students for their future, rather than for our past. In these times, digitalisation is connecting people, cities and continents to bring together a majority of the world's population in ways that vastly increases our individual and collective potential. But the same forces have made the world also more volatile, more complex, and more uncertain. And when fast gets really fast, being slow to adapt makes education systems really slow. The rolling processes of automation, hollowing out jobs, particularly for routine tasks, have radically altered the nature of work and life and thus the skills that are needed for success. For those with the right human capacities, this is liberating and exciting. But for those who are insufficiently prepared, it can mean the scourge of vulnerable and insecure work, and life without prospects.

We know that preparing students with technical or academic skills alone will not be enough for them to achieve success, connectedness and well-being whatever endeavours they wish to pursue. Social and emotional skills, such as perseverance, empathy, mindfulness, courage or leadership are central to this. We are born with what political scientist Robert Putnam calls bonding social capital, a sense of belonging to our family or other people with shared experiences, cultural norms, common purposes or pursuits. But it requires deliberate and continuous effort to create the kind of binding social capital through which we can share experiences, ideas and innovation and build a shared understanding among groups with diverse experiences and interests, thus increasing our radius of trust to strangers and institutions.

Over the last years, social and emotional skills have been rising on the education policy agenda and in the public debate. But for the majority of students, their development remains a matter of luck, depending on whether this is a priority for their teacher and their school. A major barrier is the absence of reliable metrics in this field that allow educators and policy-makers to make progress visible, and to address shortcomings.

This is why the OECD is now developing a comprehensive international assessment of the social and emotional skills of students. The study will help education leaders and practitioners better support students in the development of these critical skills. It will provide insights and guidance for jurisdictions to better understand the policies and practices that foster the development of social and emotional skills amongst students. And it will enable us to look inside a number of education systems, and understand where and how success is being achieved, for students of different ages and backgrounds.

Andreas Schleicher
Director, Education and Skills

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Introduction

"Social and emotional skills" refer to the abilities to regulate one's thoughts, emotions and behaviour. These skills differ from cognitive abilities such as literacy or numeracy because they mainly concern how people manage their emotions, perceive themselves and engage with others, rather than indicating their raw ability to process information. But, like literacy and numeracy, they are dependent on situational factors and responsive to change and development through formal and informal learning experiences. Importantly, social and emotional skills influence a wide range of personal and societal outcomes throughout one's life.

In an increasingly fast-changing and diverse world, the role of social and emotional skills is becoming more important. A faster pace of living and a shift to urban environments means people need to engage with new ways of thinking and working and new people. Ageing and more diverse populations and the dismantling of traditional social networks place additional emphasis on people's sense of trust, co-operation and compassion. Rising complexity and the increasing pace of technological change call for the ability to act independently and to adjust to changes on-the-go.

Social and emotional skills determine how well people adjust to their environment and how much they achieve in their lives. But the development of these skills is important not only for the well-being of individuals, but also for wider communities and societies as a whole. The ability of citizens to adapt, be resourceful, respect and work well with others, and to take personal and collective responsibility is increasingly becoming the hallmark of a well-functioning society. Increasing ideological polarisation and social tensions are increasing the need for tolerance and respect, empathy and generosity, and the ability to co-operate in order to achieve and protect the common good.

Social and emotional skills have been shown to influence many important life outcomes, but also to influence the development and use of cognitive skills. Coupled with increasing awareness of their malleability, and their growing relevance for the future world, this has attracted renewed interest from policy makers and researchers.

Despite their importance, measures of social and emotional skills are still scarce. OECD studies such as the Programme for International Student Assessment (PISA) and the Survey of Adult Skills (PIAAC) are covering a growing range of social and emotional skills and have shown not only that these skills are related to important life outcomes, but also that they can be assessed meaningfully within and across cultural and linguistic boundaries. The OECD is now taking this work further with a comprehensive international assessment of the social and emotional skills of school-age children, through the Study on Social and Emotional Skills. The skills included in the study are set out in the following pages, along with an explanation of why these skills are so important and how these skills may be fostered.

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01 Measuring Social and Emotional Skills

The Study on Social and Emotional Skills is a new OECD international survey that assesses 10 and 15 year-old students in a number of cities and countries around the world.

As well as examining the level of children's socio-emotional skills, the study will gather information on their family, school and community learning contexts, thus aiming to provide information about the conditions and practices that foster or hinder the development of these critical skills. The study began in mid-2017 and will be carried out over a three-year period, with the main fieldwork taking place in 2019 and the findings released later in 2020.

The study draws on a well-known framework in the field of social and emotional skills – the Big Five model – to provide a general outline of how these skills should be organised *(Figure 1)*. Social and emotional skills in this model are arranged hierarchically, with five general skill categories that can be split into narrower, lower-order skills. The broad categories of the Big Five are:[1]

- openness to experience (open-mindedness)
- conscientiousness (task performance)
- emotional stability (emotional regulation)
- extraversion (engaging with others)
- agreeableness (collaboration).

Each of the dimensions or categories encompasses a cluster of mutually related social and emotional skills. For example, task performance includes achievement orientation, reliability, self-control and persistence. Apart from demonstrating their mutual similarity, these groupings also ensure systematic, comprehensive and balanced consideration of individuals' social and emotional skills.

The study also includes the so-called "compound" skills. These skills represent combinations of two or more individual skills. For example, self-efficacy represents a combination of skills from the conscientiousness, emotional stability and extraversion categories of the Big Five. Compound skills are found to be useful for describing and understanding certain aspects of behaviour and in many cases they are shown to affect important life outcomes.

[1] These are the original terms used for the Big Five dimensions and are used in the remainder of this brochure. Terms in parentheses are used in the OECD study due to their specific content in the project.

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Figure 1 Structure of Social and Emotional Skills

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The study will assess 15 social and emotional skills spread across the 6 broad domains – the "Big Five" dimensions and the compound skills. The project used a number of criteria to decide which skills to include in the study. In particular, the skills included need to:

- provide ***a broad and balanced coverage*** of the entire domain of social and emotional skills
- be ***predictive of success*** in a wide range of important life outcomes and events
- be ***malleable*** and susceptible to possible policy interventions
- be appropriate for 10- and 15-year-olds
- be ***comparable*** and relevant across different cultures, languages, social and school contexts
- be ***relevant for the future***.

Table 1 presents short description of each of the skills, accompanied by some typical skill-related behaviour.

Achievement motivation and ***responsibility*** are predictive of a wide range of life outcomes, with special relevance for school and work settings. ***Self-control*** and ***emotional control*** have attracted substantial research attention in many fields, with evidence pointing to their strong relevance for children and how their lives will be shaped after school. ***Stress resistance/resilience*** and ***optimism*** are highly predictive of a wide variety of positive future life outcomes, and are increasingly relevant skills for the modern world.

Sociability and ***empathy/compassion*** provide a basic set of social and emotional skills needed for effective functioning and integration in work and personal environments. ***Assertiveness*** is a characteristic of leadership and is also related to entrepreneurship, while ***energy/activity*** allows people to lead a more dynamic and eventful lifestyle. ***Trust*** is highly relevant for personal well-being and societal cohesion, while ***tolerance*** and ***cultural flexibility*** have growing social relevance in increasingly diverse and polarised societies. ***Respectfulness*** and ***co-operation*** are both very relevant for children, and are highly regarded skills in the workplace.

Curiosity is a critical skill that improves learning outcomes and provides intrinsic incentives for lifelong self-development. ***Creativity/imagination*** is another skill that can bring strong benefits to both individuals and societies, while ***critical thinking*** is gaining importance in a world full of false and misleading information. ***Metacognition/self-reflection*** has been found to be one of the most fundamental skills for lifelong learning, along with the ability to adjust to changing requirements and settings. ***Self-efficacy*** is a well-researched skill with high predictive validity and of special importance in school settings.

The Big Five model has been extensively researched and has accumulated a substantial bank of evidence around it. Many research teams have independently found a similar five-factor structure of personality characteristics, and this consistency in results has contributed to the widespread acceptance of the model. The Big Five model is also comprehensive enough to include the majority of social and emotional skills studied to date. There is also extensive evidence that the Big Five domains and sub-domains can be generalised across cultures and nations. Even though research has shown the presence of some culture-specific constructs, the common Big Five structure is present in most cultures and languages around the world, not just in Western societies. Furthermore, although the Big Five model was initially derived from research on adults, it has been well-documented that it is suitable for describing differences in social and emotional skills from childhood to old age

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Table 1 Description of the skills included in the OECD's Study on Social and Emotional Skills

"BIG FIVE" DOMAINS	SKILLS	DESCRIPTION	BEHAVIOURAL EXAMPLES
TASK PERFORMANCE (Conscientiousness)	ACHIEVEMENT ORIENTATION	Setting high standards for oneself and working hard to meet them.	Enjoys reaching a high level of mastery in some activity. Opposite: uninterested in career development.
	RESPONSIBILITY	Able to honour commitments, and be punctual and reliable.	Arrives on time for appointments, gets chores done right away. Opposite: doesn't follow through on agreements/promises.
	SELF-CONTROL	Able to avoid distractions and focus attention on the current task in order to achieve personal goals.	Doesn't rush into things, is cautious and risk averse. Opposite: is prone to impulsive shopping or binge drinking.
	PERSISTENCE	Persevering in tasks and activities until they get done.	Finishes homework projects or work once started. Opposite: Gives up easily when confronted with obstacles/ distractions.
EMOTION REGULATION (Emotional stability)	STRESS RESISTANCE	Effectiveness in modulating anxiety and able to calmly solve problems (is relaxed, handles stress well).	Is relaxed most of the time, performs well in high-pressure situations. Opposite: worries about things, difficulties sleeping.
	OPTIMISM	Positive and optimistic expectations for self and life in general.	Generally in good mood. Opposite: often feels sad, tends to feel insecure.
	EMOTIONAL CONTROL	Effective strategies for regulating temper, anger and irritation in the face of frustrations.	Controls emotions in situations of conflict. Opposite: gets upset easily; is moody.
COLLABORATION (Agreeableness)	EMPATHY	Kindness and caring for others and their well-being that leads to valuing and investing in close relationships.	Consoles a friend who is upset, sympathises with the homeless. Opposite: Tends to disregard other person's feelings.
	TRUST	Assuming that others generally have good intentions and forgiving those who have done wrong.	Lends things to people, avoids being harsh or judgmental. Opposite: is suspicious of people's intentions.
	COOPERATION	Living in harmony with others and valuing interconnectedness among all people.	Finds it easy to get along with people, respects decisions made by a group. Opposite: Has a sharp tongue, is not prone to compromises.

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"BIG FIVE" DOMAINS	SKILLS	DESCRIPTION	BEHAVIOURAL EXAMPLES
OPEN-MINDEDNESS (Openness to Experience)	CURIOSITY	Interest in ideas and love of learning, understanding and intellectual exploration; an inquisitive mindset.	Likes to read books, to travel to new destinations. Opposite: dislikes change, is not interested in exploring new products.
	TOLERANCE	Is open to different points of view, values diversity, is appreciative of foreign people and cultures.	Have friends from different backgrounds. Opposite: dislikes foreigners.
	CREATIVITY	Generating novel ways to do or think about things through exploring, learning from failure, insight and vision.	Has original insights, is good at the arts. Opposite: seldom daydreams, dresses conventionally.
ENGAGEMENT WITH OTHERS (Extraversion)	SOCIABILITY	Able to approach others, both friends and strangers, initiating and maintaining social connections.	Skilled at teamwork, good at public speaking. Opposite: avoids large groups, prefers one-to-one communication.
	ASSERTIVENESS	Able to confidently voice opinions, needs, and feelings, and exert social influence.	Takes charge in a class or team. Opposite: waits for others to lead the way, keeps quiet when disagrees with others.
	ENERGY	Approaching daily life with energy, excitement and spontaneity.	Is always busy; works long hours. Opposite: gets tired easily.
COMPOUND SKILLS	SELF-EFFICACY	The strength of individuals' beliefs in their ability to execute tasks and achieve goals.	Remains calm when facing unexpected events. Opposite: avoids challenging situations.
	CRITICAL THINKING/ INDEPENDENCE	The ability to evaluate information and interpret it through independent and unconstrained analysis.	Good at solving problems, at ease in new and unknown situations. Opposite: dependent on others' guidance.
	SELF-REFLECTION/ META-COGNITION	Awareness of inner processes and subjective experiences, such as thoughts and feelings, and the ability to reflect on and articulate such experiences.	Good exam preparation strategies, able to master skills more effectively. Opposite: over- or under-estimates time needed for exam preparation or project completion.

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Social and Emotional Skills Drive Critical Life Outcomes

02

There is a large body of empirical evidence about the importance of social and emotional skills for successfully navigating one's life.

There is a large body of empirical evidence about the importance of social and emotional skills for successfully navigating one's life. They have been shown to influence experiences and achievements in all spheres of people's lives, whether it is academic achievement, job performance, occupational attainment, health and longevity, or personal and societal well-being.[2] In some cases the predictive value of the Big Five dimensions rivals that of long-established measures of cognitive skills.

Social and emotional skills not only influence life outcomes directly (for example, good social competence helps people successfully negotiate job interviews), but also their persistent and cumulative effects on other attributes, including cognitive skills. For example, good social competence can help children adapt better to the school environment, gain higher status among their peers and consequently achieve more in school. This greater school achievement translates later on into better occupational status, health and general well-being. Likewise, being curious and open-minded and having an active approach towards learning is an important prerequisite for developing and improving innate cognitive capacities.

A good illustration of this interplay between personality and cognitive skills is shown in an example from the General Educational Development (GED) programme (Heckman and Kautz, 2012). The GED was established to allow high-school dropouts in the United States to obtain a high-school diploma by passing the GED test, an academic performance test that is shown to correlate closely with other achievement and intelligence tests.

It was found that GED graduates (students who drop out from high school and then pass the GED test to obtain a high-school diploma) have very similar levels of cognitive skills to regular high-school graduates but poorer social and emotional skills. In this respect they were actually much more similar to other high-school dropouts *(Table 2)*.

However, the most important finding was that their relatively poor social and emotional skills had a strong detrimental effect on a number of important academic, work and life outcomes. In particular, in comparison with regular high-school graduates, GED graduates had much lower graduation rates from college; shorter spells of employment; lower hourly wages; higher divorce rates; worse health; a higher propensity for smoking, drinking, violent and criminal behaviour; and a greater chance of being imprisoned. Obviously, cognitive skills cannot compensate for a lack of social and emotional skills and both are needed for people to prosper in life.

[2] See OECD (2015) and Kankaraš (2017) for extensive overviews of this evidence.

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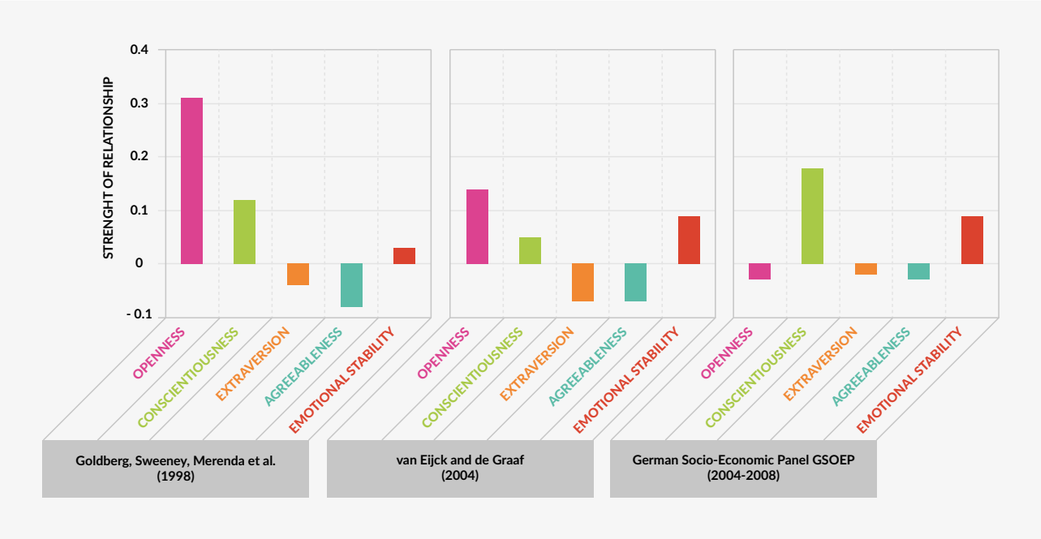
Table 2 Skills and outcomes of the three groups of high-school students in the United States

	SOCIAL AND EMOTIONAL SKILLS	COGNITIVE SKILLS	OUTCOMES
HIGH SCHOOL DROPOUTS (WITHOUT GED DIPLOMA)	LOW	LOW	−
GED GRADUATES	LOW	HIGH	−
REGULAR HIGH SCHOOL GRADUATES	HIGH	HIGH	+

Improving school achievements

Cognitive skills, such as verbal or numerical proficiency, remain the most important predictor of academic performance. However, school achievement is also dependent on a number of social and emotional skills such as perseverance, self-control, responsibility, curiosity and emotional stability. Some social and emotional skills are a crucial prerequisite for effective participation and performance in school settings. In other words, low levels of social and emotional skills can prevent the effective use of cognitive skills. For example, three studies that used nationally representative samples to investigate the relationships between the Big Five dimensions and years of schooling show that conscientiousness and openness to experience are significant and positive predictors of the number of years of schooling *(Figure 2)*.

Figure 2 The relationship between years of schooling and the Big Five dimensions



Note: Strength of relationship is represented in form of standardized regression coefficients varying between -1 and 1, with 0 indicating absence of the relationship. *Source*: Almlund et al. (2011).

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School grades are an important part of academic progress. *Figure 3* summarises key findings from a study on the relationship between the Big Five dimensions and course grades, both controlling for intelligence and not. Importantly, conscientiousness predicted course grades nearly as well as cognitive ability, and this association did not diminish even when controlling for cognitive ability. Openness to experience and agreeableness were also related to grades, although the magnitude of these relationships was smaller.

Figure 3 Correlations of the Big Five dimensions and intelligence with course grades

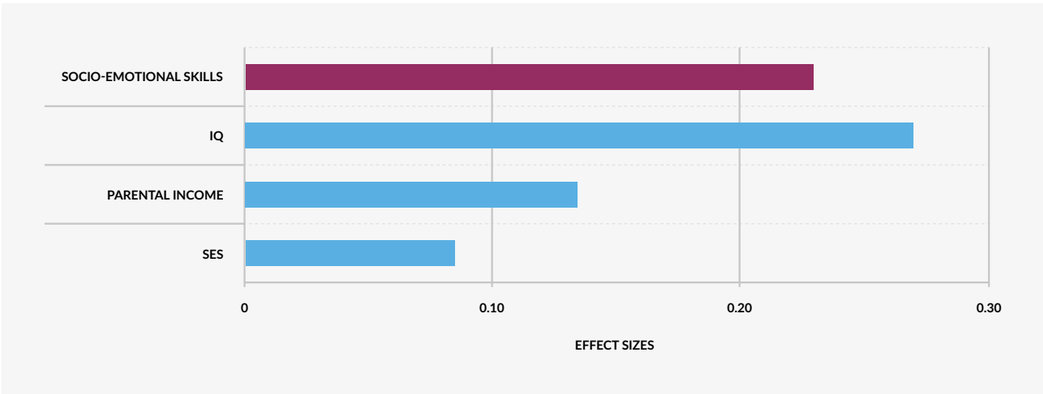
Note: Strength of relationship represents average correlation coefficients across studies.

Better skills for better job performance

Cognitive skills, such as general intelligence, have long been considered the most important determinants of employment success. More recently, however, the empirical evidence is pointing towards social and emotional skills also directly affecting a variety of job outcomes, such as occupational status and income, on top of their indirect effect through educational outcomes.

In fact, social and emotional skills can be equally, and in some cases even more important, than cognitive skills in determining future employment. For example, an analysis on the effects on occupational outcomes found that social and emotional skills are almost as influential as cognitive skills *(Figure 4)*.

Figure 4 Average effects of social and emotional skills on occupational outcomes



Note: Effect sizes are in form of standardized regression coefficients varying between -1 and 1, with 0 indicating absence of the effect; SES – socio-economic status; IQ – measure of general intelligence. *Source*: Roberts et al. (2007).

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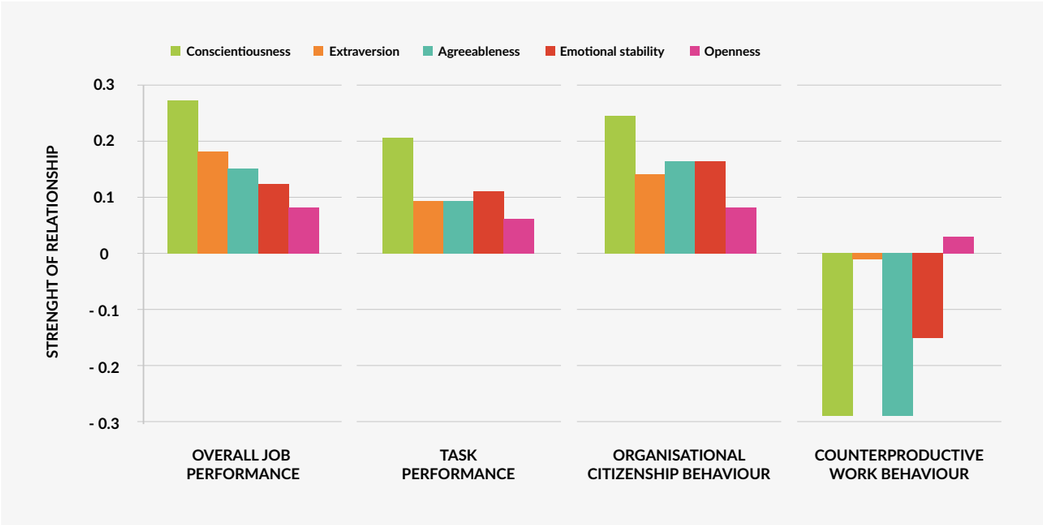
Among the Big Five characteristics, conscientiousness appears to predict performance and wages across a broad range of occupational categories, whereas the predictive power of other social and emotional skills may depend on the jobs being studied. For example, extraversion predicts future earnings, employment status and performance for those in sales and managerial occupations but it is less predictive of performance in technical/professional jobs. Emotional stability is especially important in jobs with tight deadlines and higher levels of stress. Openness to experience is more relevant in investigative and scientific positions, while agreeableness is critical when working in teams, in customer-relations or in the care sector.

While being important for all individuals, social and emotional skills may be particularly important for people with low levels of cognitive skills. A study on the cognitive and social and emotional predictors of earnings later in life found that although both sets of skills are important, for people with the lowest incomes, social and emotional skills are 2.5 to 4 times more important than cognitive ability. One of the reasons for this is that people with low social and emotional skills are much more likely to become unemployed than those with low cognitive skills.

Social and emotional skills have an even greater effect on other aspects of a person's job performance than employability and income. This is because job performance is largely under the direct control of an individual, while income and employability are more influenced by demographic and background effects. Job performance can be broken down into three distinct categories: ***task performance, organisational citizenship behaviour,*** and ***counterproductive work behaviour***. Task performance refers to behaviour that contributes towards producing goods or providing a service; organisational citizenship behaviour refers to behaviour that benefits an organisation, such as persisting with a time-consuming job or providing personal support to co-workers; and counterproductive work behaviour refers to intentional behaviour that is counter to the interests of the organisation, such as absenteeism, insulting co-workers, stealing or engaging in alcohol or drug use. *Figure 5* shows the size of the relationship between the Big Five dimensions and these different aspects of job performance averaged across many studies. Conscientiousness, with the highest correlation coefficients, was ranked top for all work performance criteria.

Figure 5 Average correlation between Big Five dimensions and job performance dimensions



Note: Strength of relationship represents average correlation across studies. *Source*: Sackett and Walmsley (2014).

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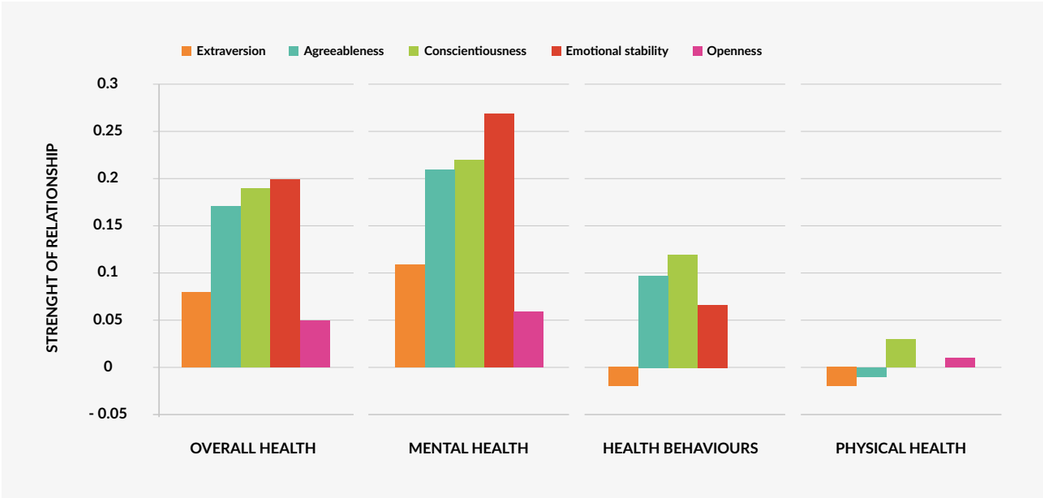
Essential ingredients of personal well-being

Educational and economic outcomes are important aspects of an individual's life. However, they can also be considered as a means to achieve more vital goals such as good health, a good quality of life, and feeling fulfilled and happy. Over the last two decades, various quality-of-life indicators have received increasing attention from policy makers due to the growing realisation that traditional economic indicators do not provide a complete picture of the general well-being of individuals and societies. Social and emotional skills, such as emotional stability, optimism, tolerance and empathy, are inherently related to personal well-being and general satisfaction with life.

Health

Broadly speaking, health-related life outcomes can be classified as pertaining to mental health (e.g. depression and other psychopathologies), health behaviours (engaging in health-related activities such as exercise and substance abuse) and physical health (e.g. fitness, diagnosed physical diseases and, ultimately, mortality). There is little doubt that social and emotional skills are strongly linked to a wide variety of mental health outcomes. For example, the combined results of numerous studies into the relationship between the Big Five dimensions and health outcomes have found that emotional stability, conscientiousness and agreeableness have particularly strong relevance for health *(Figure 6)*.

Figure 6 Average correlation estimates for life outcome categories and each Big Five factor



Note: Strength of relationship represents average correlation across studies. *Source*: Strickhouser, Zell and Krizan (2017).

Given that social and emotional skills have established links to mental health and health-related behaviour, which in turn affect physical health, we can expect a relationship between these skills and physical health outcomes. For example, Big Five dimensions have been found to be positively correlated with longevity and negatively related to obesity.

Behavioural problems

One of the most important ways in which social and emotional skills benefit both children and adults is in regulating behavioural problems such as aggression, violence, theft and the use of illegal substances. For example, *Figure 7* shows that cognitive ability at the age of 8 has a relatively weak negative relationship with behavioural problems at the age of 16, whereas social and emotional skills clearly have a much stronger negative relationship – those with higher social and emotional skills as 8-year-olds are much less likely to have behavioural problems when they are 16.

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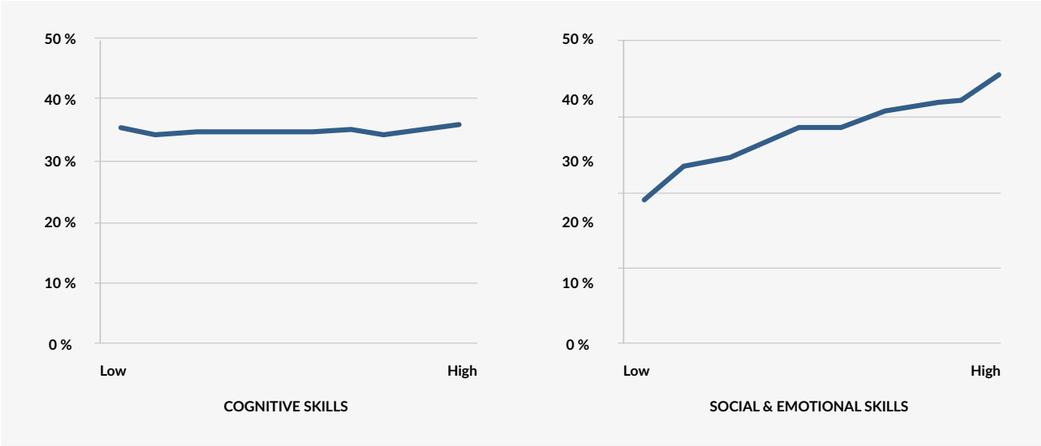
Figure 7 Proportion of teenagers with behavioural problems in relation to their cognitive and social and emotional skills

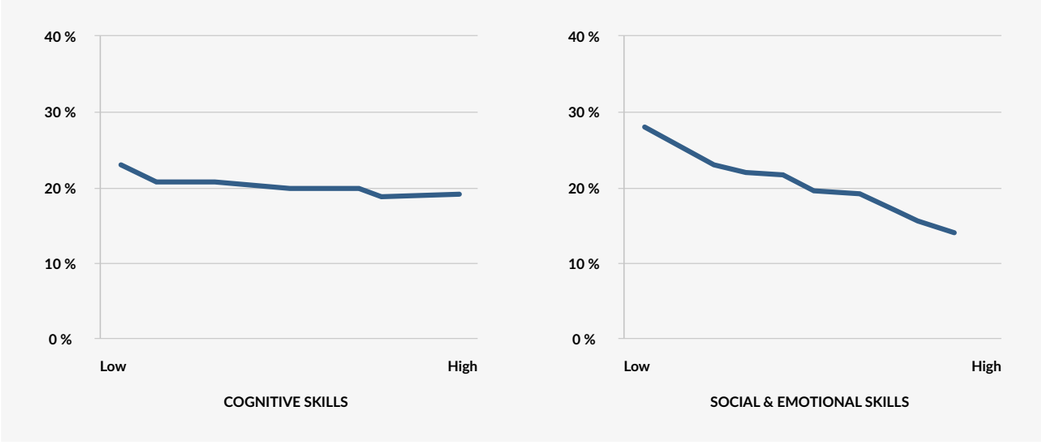


Source: OECD (2015).

Subjective well-being

Subjective well-being can be defined as having a good mental state, including all of the various evaluations, positive and negative, that people make of their lives. Examining the effects of social and emotional skills on future life outcomes for middle- and high-school children largely mirrored findings obtained from adult samples, which suggest a much stronger relationship between social and emotional skills and life satisfaction than between cognitive skills and life satisfaction *(Figure 8)*. Note in the graphs that the horizontal line on the left shows virtually no relation between life satisfaction and cognitive ability, but the quite sharp upward line on the right shows a relatively strong positive relationship with social and emotional skills.

Figure 8 Likeliness of feeling very happy in relation to cognitive and social and emotional skills



Source: OECD (2015).

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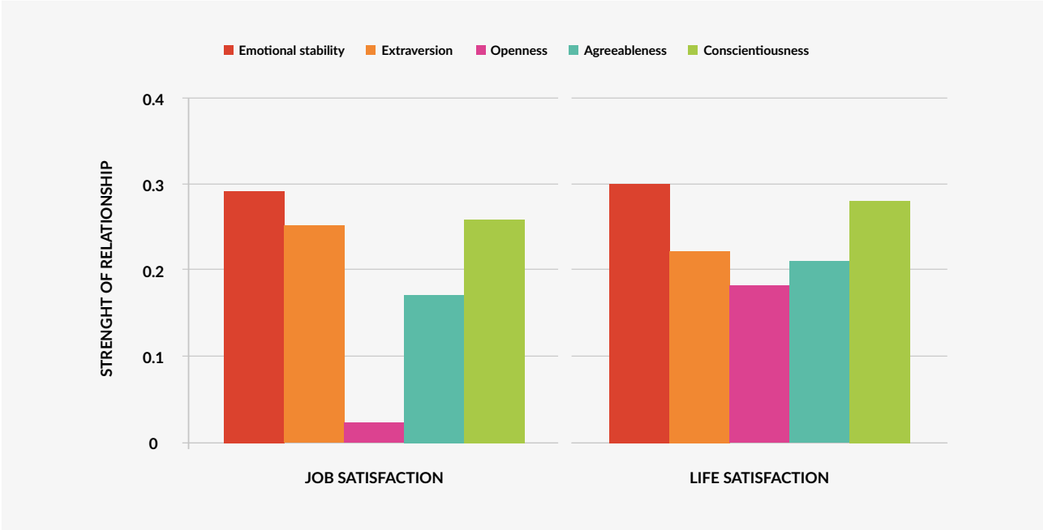
Emotional stability seems to be the most relevant of the Big Five dimensions for life satisfaction. *Figure 9* also suggests remarkably similar strength of relationships for two quality-of-life outcomes: life and job satisfaction. Establishing the exact cause of these relationships is challenging, however, because well-being has also been found to promote positive personality changes (among other factors) that can simultaneously improve people's social and emotional skills and their quality of life.

Figure 9 Average correlations of Big Five dimensions with life and job satisfaction



Note: Strength of relationship represents average correlation across studies. *Source*: Judge, Heller and Mount (2002).

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03 The Impact of Specific Social and Emotional Skills on Life Outcomes

The Big Five dimensions are a comprehensive yet simple overview of key social and emotional skills.

Information on individual social and emotional skills is more valuable as it is more precise and as such more useful for signposting the way towards effective interventions, giving teachers and parents better information about where they should target any intervention.

The following sections look in greater depth at the specific skills within the Big Five skill categories and at compound skills.

Conscientiousness – getting things done, as required and in time

CONSCIENTIOUSNESS

ACHIEVEMENT MOTIVATION	SELF-CONTROL	RESPONSIBILITY	PERSISTENCE
Setting high standards for oneself and working hard to meet them	Ability to control impulses, delay gratification and maintain concentration	Following through with promises to others	Persevere in tasks and activities, hard to distract

Conscientiousness includes a range of skills that determine the propensity to be self-controlled, responsible towards others, hardworking, persistent, orderly, virtuous and rule abiding. Most published research has either focused on the broad dimension, or has aggregated individual skill-level information into an overall conscientiousness score. However, some studies do show information on the relationship between individual skills and outcomes, and evidence is emerging from these studies that not all aspects of conscientiousness are equally useful predictors.

Figure 10 presents the relationships between various conscientiousness skills and high-school and college grades. Achievement orientation has the strongest relationship with grades at both the high-school and college levels, while orderliness has less relevance, especially for college grades.

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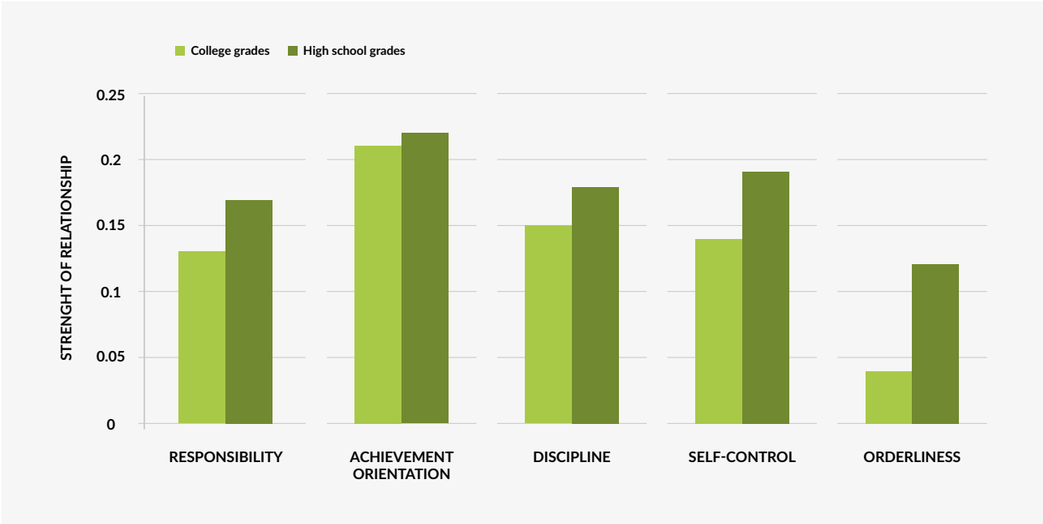
Figure 10 Relationship between conscientiousness-related skills and college and high-school grades



Note: Strength of relationships represents average correlation across studies. *Source*: Noftle and Robins (2007).

Figure 11 presents the relationships between conscientiousness and its constituent skills and various job performance criteria (task performance, job dedication and counterproductive behaviour). Achievement orientation and responsibility were substantially correlated with task performance; they were even more highly correlated with job dedication, which is a dimension of organisational citizenship. Responsibility was also strongly negatively correlated with counterproductive work behaviour such as absenteeism, insulting co-workers, stealing, or engaging in alcohol or drug use.

Figure 11 Relationship between conscientiousness-related skills and job performance

Note: Strength of relationships represents average correlation across studies. *Source*: Dudley et al. (2006).

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Conscientiousness skills are also associated with health-related behaviours *(Figure 12)*. For example, self-control is associated with a lower likelihood of substance use, risky driving and violence. Responsibility has a strong negative relationship with drug use, suicide and violence. Achievement orientation, virtue, discipline and orderliness are also negatively associated with unhealthy behaviour.

Figure 12 Relationship between Conscientiousness-related skills and health-related behaviours

Note: Strength of relationships represents average correlation across studies. *Source*: Bogg and Roberts (2004).

Perhaps the most widely researched social and emotional skill in early childhood studies is self-control. Delay of gratification at the age of 4 (an indicator of self-control) was associated with higher levels of cognitive and self-regulatory competence and coping at the age of 16, including higher scores in college entrance exams. Ten-year-olds who exhibited high levels of self-control were also shown to have greater academic attainment four years later. Lack of self-control in childhood is also linked to lower income, low socio-economic status and more self-reported financial difficulties in adult life; on the other hand, better self-control was associated with better physical health in adulthood. Children who exhibited greater self-control were also less likely to be dependent on substances in adulthood, including tobacco, alcohol, cannabis, and street or prescription drugs. These associations were independent of factors such as intelligence and socio-economic status.

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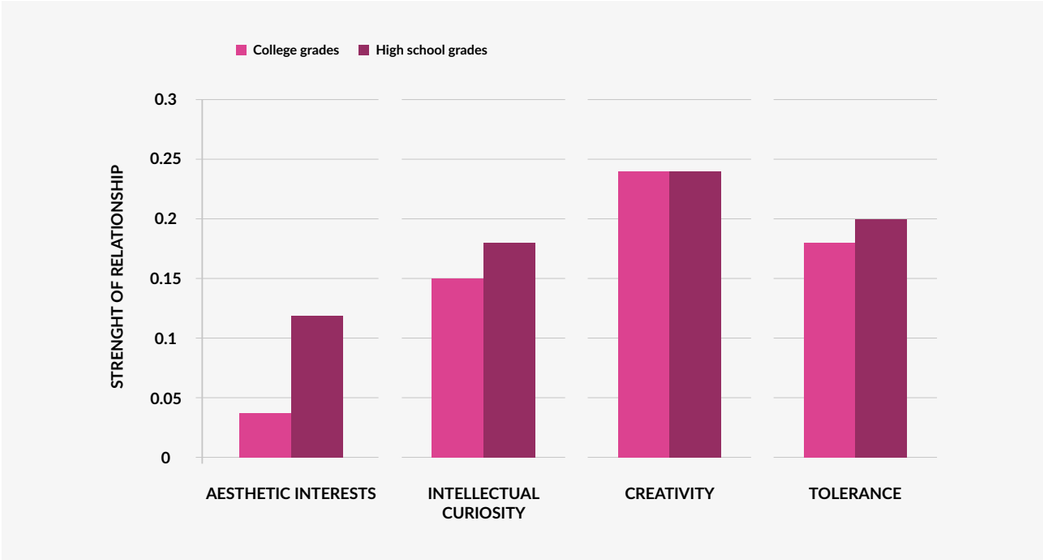
Openness to experience – exploring the world of things and ideas

OPENNESS TO EXPERIENCE

CURIOSITY	CREATIVITY	CULTURAL FLEXIBILITY/ TOLERANCE
Interest in ideas and love of learning, and intellectual exploration	Generating novel ideas or products	Is open to different points of view, values diversity

Openness to experience is regarded as one of the key domains for intrinsic motivation to learn and develop one's potential. As such, it is especially relevant in the school context. Openness to experience concerns an individual's preference for variety and novelty, either in the form of original intellectual stimuli (a sub-domain called intellect, e.g. new ideas, new theories), or in the form of novel experiential stimuli (a sub-domain called culture, e.g. aesthetic and cultural interests). Skills belonging to the intellect sub-domain are especially relevant to the development of cognitive skills. In particular, intellectual curiosity, creativity and intellectual efficiency are considered to be one of the most important drivers of intellectual development and lifelong learning. *Figure 13* shows the relationships between various openness-to-experience skills and school grades in both high school and college. Creativity, curiosity and tolerance have substantial relationships with grades at both the high-school and college levels.

Figure 13 Relationship between openness-related skills and college and high-school grades



Note: Strength of relationships represents average correlation across studies. *Source*: Dudley et al. (2006).

Openness-related skills are found to be related to adaptability to change, which can be broken down into criteria including interpersonal adaptability, adjustment to new living environments, creative performance and coping with organisational change. Ingenuity, curiosity and cultural tolerance were more related to these adaptability criteria than aesthetic interests were.

It should also be noted that various sub-domains of openness may have strong relevance for particular classes of jobs and industries, a fact that might be lost when examining a more generalised relationship with job performance. For example, intellectual curiosity is important in scientific or investigative professions, aesthetic interests are critical for work in art fields, and innovativeness and creativity are especially beneficial in entrepreneurial settings.

Extraversion – enjoying and exceling in the company of others

EXTRAVERSION

ENERGY/ACTIVITY	ASSERTIVENESS	SOCIABILITY
Sustaining vigorous activity throughout a day	Enjoying leadership, dominance and assertive behaviours	Preference for social interactions

Extraversion represents the tendency to engage and enjoy friendly social interactions, to attract attention, dominate in relationships and to sustain vigour throughout the day. Figure 14 presents the relationships of extraversion skills with task and citizenship performance. It shows that activity is related to task performance, while assertiveness (i.e. dominance) is more related to organisational citizenship.

Figure 14 Relationship between extraversion-related skills and task performance and organisational citizenship

Note: Strength of relationships represents average correlation across studies. *Source*: Judge et al. (2013).

Another outcome highly relevant to extraversion is leadership – the process by which an individual, group or organisation outlines group goals and intentionally influences the behaviour of others in order to achieve these goals. Organisations invest considerable resources into leadership development as these skills are highly influential of overall company performance. Research has established that, of the Big Five dimensions, extraversion is the best predictor of leadership outcomes, while among the individual social and emotional skills, dominance (assertiveness) and sociability correlate most strongly.

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Agreeableness – concern for the well-being of others

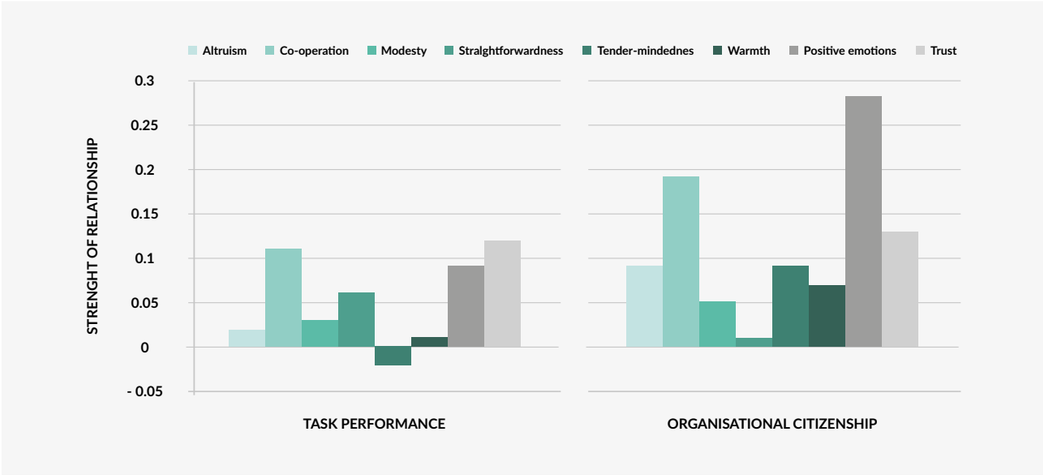
AGREEABLENESS

EMPATHY	CO-OPERATION	TRUST
Perspective taking and empathic concern for others well-being	Living in harmony with others	Assuming that others generally have good intentions

Agreeable individuals place greater value on their interpersonal relationships, are more co-operative and helpful, and are (as a consequence) better liked by their peers. However, evidence suggests that, despite its positive social benefits, agreeableness is negatively related to earnings. This may be due to the fact that agreeable people are more likely to select service and nursing occupations where average incomes are lower.

Agreeableness skills do not correlate with grades, but studies showed that agreeableness is an important predictor of school absences. *Figure 15* shows the relationships of agreeableness skills with task performance and organisational citizenship. The correlations with task performance are not large but co-operation and positive emotions (i.e. consideration) have substantial correlations with organisational citizenship.

Figure 15 Relationship between agreeableness-related skills and task performance and organisational citizenship



Note: Strength of relationships represents average correlation across studies. *Source*: Judge et al. (2013).

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Emotional stability – having a calm and positive emotionality

EMOTIONAL STABILITY

STRESS RESISTANCE	EMOTIONAL CONTROL	OPTIMISM
Effectiveness in modulating anxiety and response to stress	Keeps their emotions and temper under control	Positive expectations for self and life

Emotional stability – or its negative form, neuroticism/negative emotionality – characterises individual differences in the frequency, variability, intensity and quality of emotions. At the level of individual social and emotional skills, models of negative emotionality typically differentiate between three types of negative affect: fear/anxiety, sadness/depression and irritation/anger. Of these, the tendency to experience anxiety and fear tends to be most central.

As with conscientiousness, emotional stability seems to be widely important across a range of life outcomes. But here again the importance of individual skills within this domain varies, and in relation to different outcomes. A study of school absences and assessed social and emotional skills found that the broad factor of emotional stability, and the separately measured skills of optimism and emotional control, were consistently negatively related with school absences.

Figure 16 shows the relationships between individual emotional stability skills and task performance and organisational citizenship. As with agreeableness, the correlations with task performance are not large but angry hostility and optimism have substantial correlations with organisational citizenship.

Figure 16 Relationship between emotional stability-related skills and task performance and organisational citizenship

Note: Strength of relationships represents average correlation across studies. *Source*: Judge et al. (2013).

Emotional stability skills are found to be the most predictive of mental health. Optimism has the highest relation to life satisfaction scores, while emotional control and resilience are other important correlates of personal well-being. Links between childhood emotional stability and mental health in later life were also relatively strong. For example, anxiousness and withdrawal at the age of 8 were predictive of mood, anxiety and phobic disorders at the ages of 16 and 21, even after taking into account other social, childhood and family factors.

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Compound social and emotional skills

COMPOUND SKILLS

SELF-EFFICACY	METACOGNITION	CRITICAL THINKING
Beliefs in one's capabilities to execute tasks and achieve goals	Awareness and regulation of inner processes and subjective experiences	Thinking for yourself; grounding beliefs on critical analysis through independent thought

In addition to the Big Five dimensions and their sub-dimensions/individual skills, there has also been considerable research into a number of other social and emotional skills outside of the Big Five framework. These are sometimes called "compound" personality characteristics, since they are found to be combinations of aspects of a number of individual skills and characteristics. Examples include self-efficacy, metacognition, critical thinking, self-esteem and core self-evaluations. The main advantage of compound skills lies in their relevance to important life and work outcomes as they combine several useful skills into an overall composite.

Self-efficacy

Self-efficacy represents the strength of individuals' beliefs in their ability to perform tasks and achieve goals. It is found to be related to the Big Five dimensions of conscientiousness, emotional stability and, to a lesser degree, extraversion, and can be seen as a (partial) composite of the achievement orientation, optimism and dominance/confidence aspects of these categories.

The importance of self-efficacy lies in the fact that people's performance in various life situations is influenced not only by their actual abilities, but also by their belief in the strength and adequacy of those abilities. In fact, people's beliefs in their capabilities can often be a better predictor of their performance than the actual level of their capabilities, since these beliefs determine how and to what degree they use their knowledge and skills. Research indicates that the optimal level of self-efficacy is slightly above actual ability, thus allowing individuals to choose challenging but still manageable tasks that promote learning and further development.

Self-efficacy affects people's capacity to deal effectively and competently with challenges, as well as their motivation to initiate actions and persist in the face of difficulty. As such, it has widespread influence on all aspects of a person's life. Self-efficacy affects students' academic efforts and performance, since those with high self-efficacy are more likely to take the initiative in their own study, actively participate in classes and take a hands-on approach to learning.

Career choice, job attitudes, training proficiency and job performance can all also be determined by self-efficacy. It influences workers' learning and goal-setting and their level of effort and persistence in performing or learning tasks. Self-efficacy is found to be a moderately strong predictor of work-related performance, depending on task complexity – self-efficacy was especially important for performance in less complex tasks *(Figure 17)*. High self-efficacy is also associated with greater job satisfaction and reduced workforce turnover.

Gender differences in expectations of self-efficacy influence the career choices of young women, with women who are highly competent in maths or science often choosing other career tracks due to low self-efficacy perceptions about their competence.

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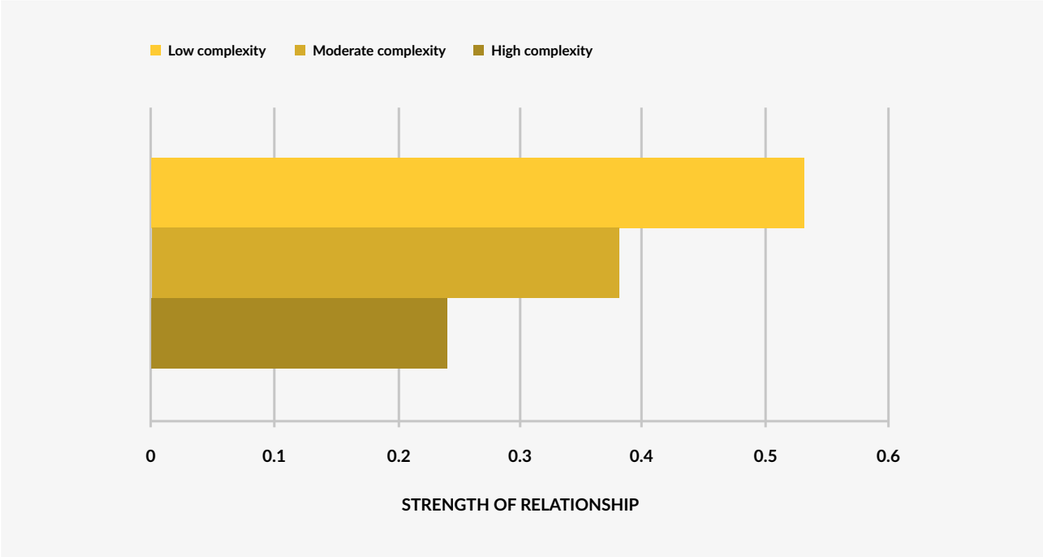
Figure 17 Relationship between self-efficacy and work-related performance



Note: Strength of relationship represents average correlation across studies. *Source*: Stajkovic and Luthans, 1998.

Metacognition

Metacognition represents the ability to accurately interpret and regulate cognitive processes such as learning, thinking, perceiving and memorising. It is similar to self-awareness, a skill belonging to the openness to experience domain, in that it involves self-representation and self-monitoring of cognitive processes. But it also includes the ability to control and direct cognition, and in this aspect it is similar to some of the skills related to the domain of conscientiousness, such as self-control. Metacognition not only regulates mental processes but also helps to maintain motivation, improve effort and persistence, avoid distraction, and alleviate obstacles. People with good metacognitive skills are aware of their strong and weak points, better able to evaluate their capacity in relation to the task at hand, and have a better set of mental "tools" that can be deployed to achieve their goals.

Metacognitive skills and strategies have attracted lots of attention in the fields of education due to their role in the development of self-regulated learning. Learning to learn is considered to be one of the key capabilities for effective functioning in the modern age (for example, it is listed as one of the main competences in the European Union list of key competences for the 21st century). A large number of studies have found a positive relationship between the use of metacognitive strategies and academic performance. In addition, empirical findings show that teaching children metacognitive strategies has medium-sized to large effects on school performance.

Critical thinking

Ithough social and emotional skills are often called "non-cognitive skills", the term is an obvious misnomer since every aspect of mental functioning is based on some form of information processing and cognition. One good example of a compound skill that relies heavily on both cognitive and personality components is critical thinking. It represents an ability to reflect on information, interpret it in a new context and find solutions to novel problems based on existing knowledge. It encompasses cognitive capacities to use the rules of logic and cost-benefit analysis, think strategically, and apply rules to new situations to solve problems. However, critical thinking also incorporates aspects of the Big Five dimension of openness to experience, such as independence

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(autonomy) and unconventionality, which represent the driving factors behind the use of cognitive skills for purposes of critical inquiry.

There is a consensus that critical thinking is an increasingly important skill that should be cultivated in formal education. The ability to act independently and reflect critically upon a given reality is especially important in the fast-changing environment we live in. The role of educational systems is thus increasingly seen as one helping children become lifelong learners, individuals who are autonomous and adaptable, able to critically reflect and understand the evolving reality. A critical stance is also seen as an increasingly relevant skill in a world with more and more misinformation, the unexamined acceptance of which can lead to dangerous consequences for both society and individuals.

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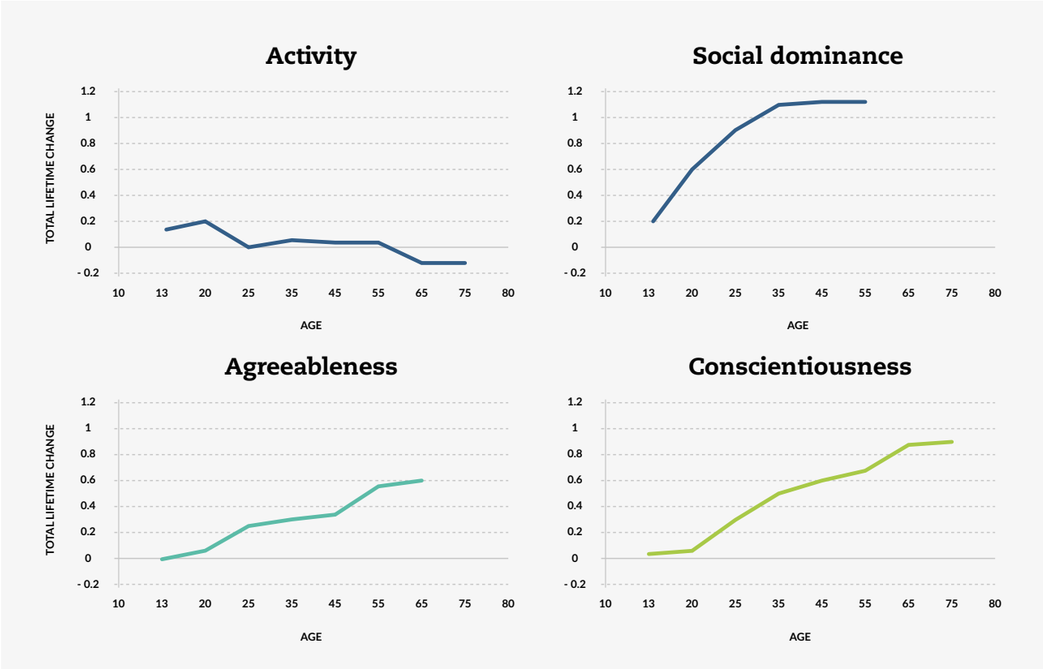
04 Social and Emotional Skills are Learnable

Social and emotional skills develop and change with age, and are affected by a combined influence of biological and environmental factors, life events, and changes in self-perception.

On average, levels of conscientiousness, emotional stability, social dominance (one aspect of extraversion) and agreeableness generally increase with age. On the other hand, activity (another aspect of extraversion) slowly decreases with age, while openness to experience shows an inverted U relationship with age *(Figure 18)*.

Figure 18 Cumulative average-level changes in personality throughout the life span



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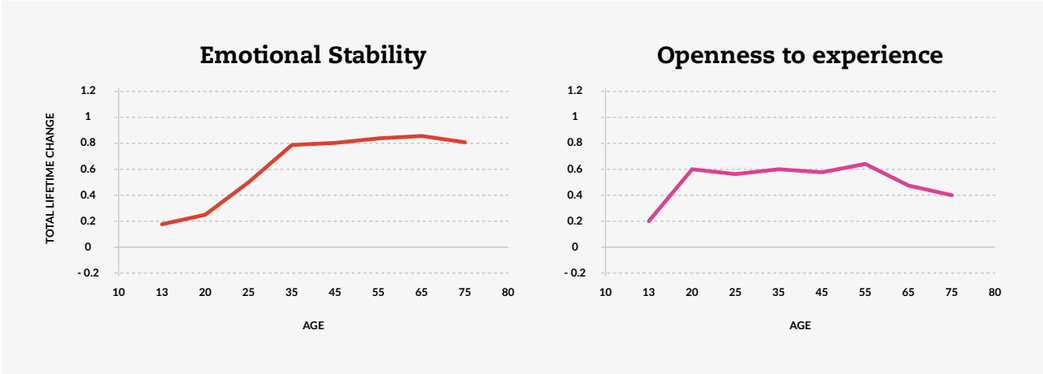

Note: Total lifetime change represents cumulative size of change over life course. *Source*: Roberts, Walton and Viechtbauer (2006).

In addition, social and emotional skills are found to become increasingly stable during adulthood. This means that, early in life, children's social and emotional skills may fluctuate substantially, while in later life this fluctuation decreases with age. Considerable dips and swings in the levels of social and emotional skills can occur from childhood to adolescence. Specifically, agreeableness, conscientiousness and openness to experience are found to actually decline from late childhood into early adolescence, and then increase rapidly from late adolescence into early adulthood. Emotional stability also appears to decline in adolescence, before recovering later in life. Clearly, childhood and adolescence are key periods for the development of social and emotional skills and should be a focus for the development of these skills.

Interventions and change

As noted above, social and emotional skills are malleable and especially during the early years. This leads to the key question: can systematic interventions change the social skills of children in desired directions? The most comprehensive study to date that aimed to answer this question evaluated the results of 213 school-based social and emotional learning (SEL) programmes, involving more than 270 000 primary and secondary school children (Durlak et al., 2011). Overall, the study found the programmes had a moderately strong effect on the development of social and emotional skills when comparing those who received the programmes with those who did not, thus demonstrating that interventions to improve the social and emotional skills of school children can be effective.

As might be expected, the effectiveness of intervention is found to largely depend on the quality of the intervention programme. Those interventions that used a coherent and co-ordinated set of activities, with a focus on the development of particular social and emotional skills rather than a general skillset, are shown to have strong intervention effects.

An often-cited example of an intervention successfully improving social and emotional skills is the Perry Preschool Program. This was a program for disadvantaged 3- and 4-year-olds with an intelligence quotient (IQ, a measure of general cognitive abilities) below 85 at the start of the study. The children were taught various social skills and how to work with others. The programme also included weekly home visits that focused on improving child-parent interactions. The intervention lasted two years and then both the treatment and control groups were followed until the age of 40. It turned out that the intervention did not have any lasting effect on children's cognitive skills. However, results showed persisting improvements in a variety of measures of social and emotional skills of children in the treatment group, which lead to substantively better life outcomes in a variety of areas *(Figure 19)*.

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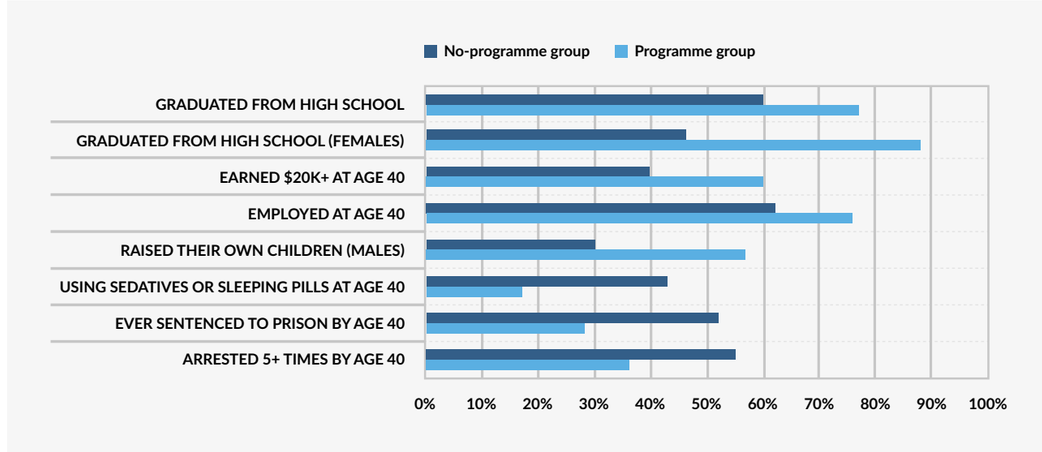
Figure 19 Long-term consequences of participation in the Perry Preschool Program



Source: Schweinhart et al. (2005).

Due to the lack of relevant intervention programmes for adults it is difficult to infer how malleable these skills are in later years. However, the evidence indicates that continuing to learn after finishing formal education, including learning in the workplace, can have a significant influence on people's social and emotional skills. Furthermore, recent studies on the effectiveness of cognitive and clinical interventions indicate that substantial changes in social and emotional skills are possible, even after relatively short treatment periods, and also across lifespans. For example, a relatively short, 16 week programme aimed at increasing the cognitive ability of older adults (aged from 60 to 94 years old) promoted substantial and relatively lasting increases in openness to experience compared to the control group. Likewise, a very short, 2 week clinical intervention led to significant improvement in participants' emotional stability; importantly, the changes were not affected by age, indicating that people of different ages are equally susceptible to these kinds of interventions.

Important life events, such as marriage or getting a first job, can have a substantial influence on social and emotional skills. For example, people in stable relationships have been shown to become less neurotic and more agreeable than those whose relationships have ended. Likewise, starting a first job was found to increase conscientiousness, while military training decreased agreeableness.

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Conclusions

The Study on Social and Emotional Skills is the first international effort to develop a comprehensive set of metrics around social and emotional skills designed to enhance policies to improve the development and well-being of children. The focus is on the skills presented in Figure 1. After careful examination of the existing empirical evidence, including the evidence presented in this brochure, the project selected a set of the most relevant social and emotional skills to include in the study. These were the skills found to be the most predictive of success in a wide range of important life outcomes. They have been shown to be malleable, assessable in school-age children, and relevant in different cultural and social contexts. Finally, the selected skills provide children with the capabilities that are not just relevant for the world as it is now but also for the world that is to be. The study will examine the skills in two groups of children –10 and 15-year olds – thus allowing the study not only to determine their average levels but also to compare these across different developmental stages.

Apart from assessing students' social and emotional skills, the study will also gather a wide range of information on the children's family, school and community environments from their teachers, parents and school principals. Along with information collected from the children, this will help to place social and emotional skills in the context of other relevant individual, group and community characteristics and factors that are relevant to the development of these skills.

The Study on Social and Emotional Skills will help address numerous questions that are considered important for policy makers, teachers, school administrators and parents. These include:

- Which socio-emotional skills predict children's cognitive, educational and social outcomes, as well as their general well-being?
- Which family learning contexts, such as parental styles or learning resources, predict children's social and emotional development?
- Which school learning contexts, such as content or type of teaching methods or school resources, predict children's social and emotional development?
- Which community learning contexts, such as sport and cultural resources or safety, predict children's social and emotional development?
- How malleable are social and emotional skills and how do they differ across children of different ages?
- What are the social and emotional skill gaps according to children's gender and socio-economic background, and what are their likely causes?

Hence, the ultimate goal of the study is more than just to obtain valid, reliable and comparable information on the level of these skills in children. It is rather to help participating cities and countries identify stimulating factors and potential barriers that improve or prevent children's socio-emotional development. This information can then be used by parents, teachers and schools to understand which socio-emotional skills matter for which situations or outcomes, why they matter, and how they can be fostered.

The study will give policy makers, education leaders and other stakeholders improved understanding of whole-child development. They will be able to review existing policies and practices and adopt policies that better support the development of these skills. In doing so, they will be able to adapt children's learning environments to better promote the growth of these skills, and consequently improve children's well-being and future prospects.

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Bibliography

Almlund, M. et al. (2011), **"Personality psychology and economics"**, *Handbook of the Economics of Education*, Vol. 4, pp. 1-181, http://doi.org/10.1016/B978-0-444-53444-6.00001-8

Bogg, T. and B.W. Roberts (2004), **"Conscientiousness and health behavior: A meta-analysis of the leading behavioral contributors to mortality",** *Psychological Bulletin*, Vol. 130(6), pp. 887-919.

Dudley, N.M. et al. (2006), **"A meta-analytic investigation of conscientiousness in the prediction of job performance: Examining the intercorrelations and the incremental validity of narrow traits"**, *Journal of Applied Psychology*, Vol. 91(1), pp. 40-57.

Durlak, J.A. et al. (2011), **"The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions"**, *Child Development*, Vol. 82(1), pp. 405-432, http://doi.org/10.1111/j.1467-8624.2010.01564.x

Heckman, J.J. and T. Kautz (2012), **"Hard evidence on soft skills"**, *Labour Economics*, Vol. 19(4), pp. 451-464, http://doi.org/10.1016/j.labeco.2012.05.014

Judge, T.A., D. Heller and M.K. Mount (2002), **"Five-factor model of personality and job satisfaction"**, *Journal of Applied Psychology*, Vol. 87(3), pp. 530-541, http://doi.org/10.1037/0021-9010.87.3.530

Judge, T.A. et al. (2013), **"Hierarchical representations of the five-factor model of personality in predicting job performance: Integrating three organizing frameworks with two theoretical perspectives"**, *Journal of Applied Psychology*, Vol. 98(6), pp. 875-925.

Kankaraš, M. (2017), **"Personality matters: Relevance and assessment of personality characteristics"**, *OECD Education Working Papers*, No. 157, OECD Publishing, Paris, http://dx.doi.org/10.1787/8a294376-en

Noftle, E.E. and R.W. Robins (2007), **"Personality predictors of academic outcomes: Big five correlates of GPA and SAT scores"**, *Personality Processes and Individual Differences*, Vol. 93(1), pp. 116-130, https://doi.org/10.1037/0022-3514.93.1.116

OECD (2015a), ***Skills for Social Progress: The Power of Social and Emotional Skills***, OECD Skills Studies, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264226159-en

Roberts, B.W., K.E. Walton and W. Viechtbauer (2006), **"Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies"**, *Psychological Bulletin*, Vol. 132(1), pp. 1-25, http://doi.org/10.1037/0033-2909.132.1.1

Roberts, B.W. et al. (2007), **"The Power of Personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes"**, *Perspectives on Psychological Science*, Vol. 2(4), pp. 313-345, http://doi.org/10.1111/j.1745-6916.2007.00047.x

Sackett, P.R. and P.T. Walmsley (2014), **"Which personality attributes are most important in the workplace?"**, *Perspectives on Psychological Science*, Vol. 9(5), pp. 538-551, http://doi.org/10.1177/1745691614543972

Schweinhart, L.J. et. al. (2005), ***Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40***, HighScope Press, Ypsilanti, MI.

Stajkovic, A.D. and F. Luthans (1998), **"Self-efficacy and work-related performance: A meta-analysis"**, *Psychological Bulletin*, Vol. 124(2), pp. 240-261, http://doi.org/10.1037/0033-2909.124.2.240

Strickhouser, J.E, E. Zell and Z. Krizan (2017), **"Does personality predict health and well-being? A metasynthesis"**, *Health Psychology*, Vol. 36(8), pp. 797-810, http://doi.org/10.1037/hea0000475

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