Chapter 4

Learning contexts that drive skills formation

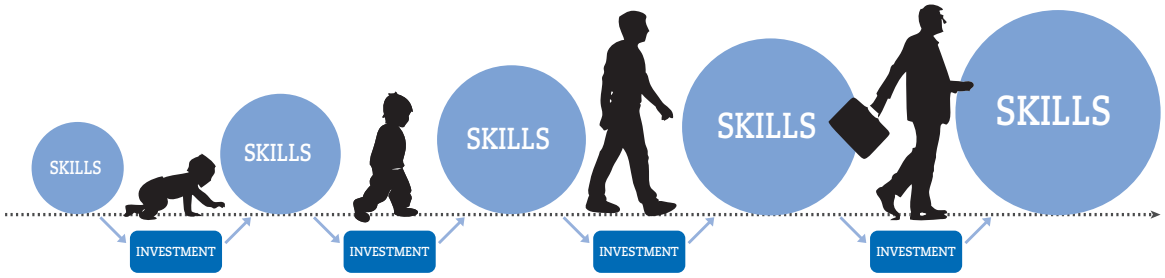
This chapter describes how the process of skill development unfolds, and highlights the elements involved in successful developmental pathways in which "skills beget skills". Social and emotional skills play a particularly important role in skills formation since they not only drive future development of social and emotional skills but also cognitive skills. Parental engagement and attachment have considerable impact on children's early social and emotional skill development. School-based programmes can also play a role by promoting intensive interactions between teachers and children through mentoring. Programmes specifically designed to raise social and emotional skills in schools have shown positive results in the short term but there are rarely long-term rigorous evaluations. The few available ones, mainly aimed at disadvantaged children, have shown long-lasting effects on social and emotional skills development. Successful early childhood intervention programmes directly involve children and parents, and tend to include parental training, counselling sessions and mentoring. Successful programmes aimed at older children train teachers, while those aimed at older adolescents emphasise mentoring and hands-on workplace learning.

The process of social and emotional development

One of the most salient features of skill development is that skills beget skills

Developing skills is like making a snowball. Children gather a handful of snow and start rolling it on the ground. It gets progressively bigger; the bigger the snowball, the faster it grows. Children need to start early with a small and solid snowball, if they are to develop a sizeable snowball before the end of adolescence. Snow begets snow, and skills beget skills. Figure 4.1 illustrates this point.

Figure 4.1. **Skills beget skills**



Having more skills today helps develop more skills tomorrow

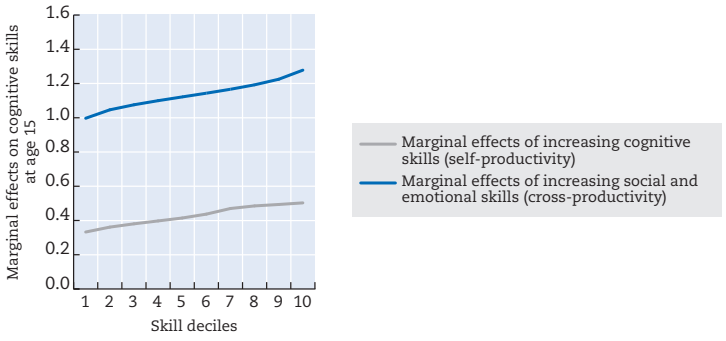
This chapter extends the analysis presented in the previous chapter by mobilising evidence based on dynamic factor models to explain how skills progressively develop over time. Figure 4.2 presents simulated gains in skills at age 15 as induced by an increase in skills at age 14, by level of skills at age 14 for Korea. It shows that children who start out in different levels of skill deciles gained different amounts of skills in the next period. The effects of increasing social and emotional skills (in this case, children's sense of responsibility, locus of control and self-esteem) at age 14 on social and emotional skills at age 15 increased with the level of social and emotional skills at age 14 (blue line in Panel B). Moreover, the effects of increasing social and emotional skills at age 14 on cognitive skills at age 15 (as reflected in achievement tests and grades) also increased with the level of social and emotional skills at age 14 (blue line in Panel A). Figure 4.2 also shows that the effects of increasing cognitive skills at age 14 on cognitive skills at age 15 increased with levels of cognitive skills at age 14, but at a slower rate (grey line in Panel A). This suggests that the current level of social and emotional skills matter more than the current level of cognitive skills in developing future cognitive skills. Children who are confident, responsible and believe in their capacity to affect the future are more likely to achieve high academic standards than those who are already smart.

Studies from the United States show similar findings. There is a strong impact of levels of cognitive, social and emotional skills in childhood on future development of these skills (Cunha and Heckman, 2008; Cunha, Heckman and Schennach, 2012). Moreover, these studies document that past levels of social and emotional skills play an important role in developing cognitive skills, although past cognitive skills have limited impact on future social and emotional skills. A child with a higher level of social and emotional skills (i.e. calm, respectful and emotionally stable, in the case of the above mentioned findings) is more likely to develop a capacity to perform well in achievement

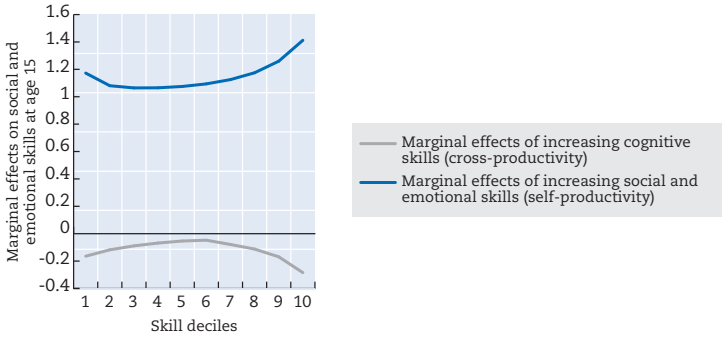
tests. Recent evidence from the Programme for International Student Assessment (PISA) 2012 is also consistent with these finding. Students' engagement with school, the belief that they can achieve at high levels and their ability and willingness to do what it takes to reach their goals play a central role in shaping students' ability to master academic subjects and raise cognitive proficiency (OECD, 2013a).

Figure 4.2. **Having more skills today helps develop more skills tomorrow (Korea)**

Panel A. **The marginal effects of increasing cognitive and social and emotional skills at age 14 on changes in cognitive skills between ages 14-15, by skill deciles**



Panel B. **The marginal effects of increasing cognitive and social and emotional skills at age 14 on changes in social and emotional skills between ages 14-15, by skill deciles**



StatLink http://dx.doi.org/10.1787/888933163793

Note: Results are based on the OECD's longitudinal analyses (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility and locus of control at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

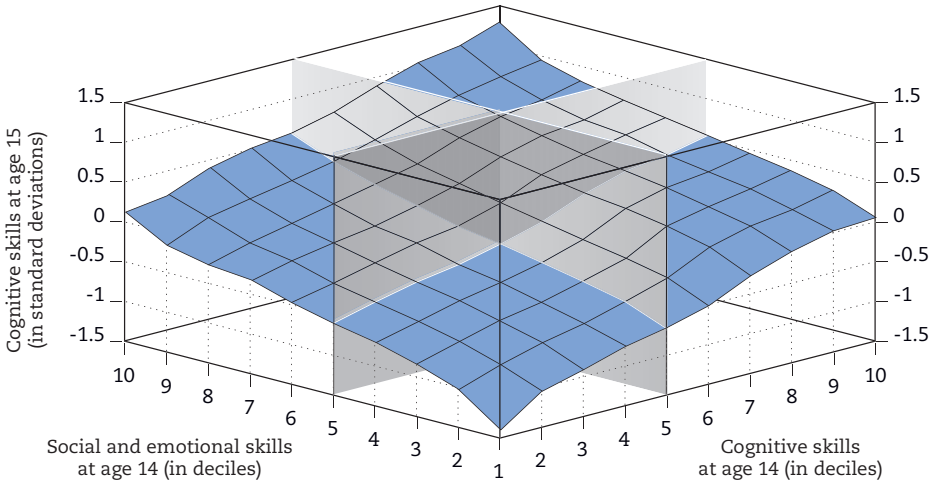
In sum, having more skills today allows individuals to gain more skills in the future. It also suggests that skills inequality can progressively grow over time and that addressing skill deficits early in children's lives is important. The evidence from Korea and the United States suggests that early investment in social and emotional skills among disadvantaged children (i.e. those who tend to have lower levels of skills when young) is important for them to accumulate sufficient levels of cognitive, social and emotional skills. Otherwise, society will need to remediate skill inequalities once they have become substantial.

Skills beget skills can be explained by the cumulative nature of skills and the tendency that those with a higher level of skills receive more learning investments

There are several ways to explain why "skills beget skills". First, skills are key components of human capital. They are cumulative and do not necessarily disappear over time. Those with higher levels of skills accumulated in the past tend to have higher levels of future skills. Figure 4.3 demonstrates this point by projecting current (age 14) levels of cognitive, social and emotional skills on future (age 15) levels of skills for Korea. Panel A shows that the higher the deciles of current cognitive skills, the higher the levels of future cognitive skills. Moreover, those with more social and emotional skills today tend to have more cognitive skills tomorrow. Among those at the 5th decile of cognitive skills, an increase in social and emotional skills from the lowest to the highest decile would lead to an increase in the future cognitive skills by one standard deviation. Panel B shows that the higher the deciles of social and emotional skills, the higher the deciles of future social and emotional skills. However, current deciles of cognitive skills do not seem to affect the deciles of future social and emotional skills.

Figure 4.3. **Social and emotional skills drive the accumulation of cognitive as well as social and emotional skills (Korea)**

Panel A. **Cognitive skills at age 15 as a function of cognitive and social and emotional skills at age 14**

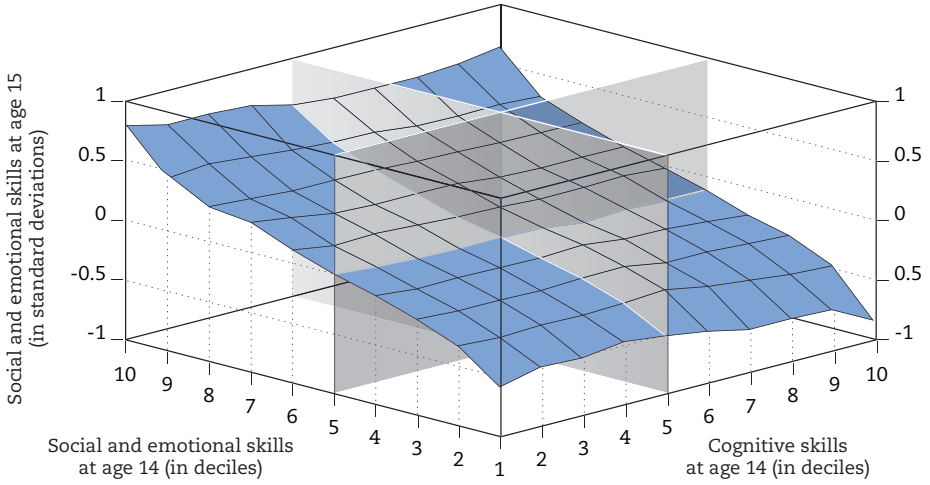


StatLink http://dx.doi.org/10.1787/888933163804

Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

Figure 4.3. **Social and emotional skills drive the accumulation of cognitive as well as social and emotional skills (Korea)** (continued)

Panel B. **Social and emotional skills at age 15 as a function of cognitive and social and emotional skills at age 14**



Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

Another possible reason for "skills beget skills" is that those with a higher level of skills are likely to receive more learning investments. Parents may invest more in their children's skills if they show promising progress in skill development. Teachers may spend more time and effort helping students who are more motivated to learn. Alternatively, children who are more motivated and smart are more likely to seek out new learning opportunities than those who are less motivated and smart. Table 4.1 shows the impact of raising levels of children's skills on the changes in investment they receive to further develop these skills. It suggests that those with higher levels of social and emotional skills tend to receive more investment to further develop both cognitive and social and emotional skills. Korean children who have demonstrated a stronger sense of responsibility, locus of control and self-esteem tend to experience better learning conditions for enhancing their cognitive and socio-emotional skills. This, however, is not the case for cognitive skills: Korean parents may try to compensate for the lack of their children's cognitive skills by investing more in cognitive as well as social and emotional skills.

Table 4.1. **Children with higher levels of social and emotional skills receive higher levels of new investment in cognitive and social and emotional skills (Korea)**

	New investment in social and emotional skills	New investment in cognitive skills
Increase in social and emotional skills	Increase	Increase
Increase in cognitive skills	Decrease	Decrease

Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). The impacts of past skills on investment are all statistically significant at $\alpha = 0.05$. Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional factor. Investments are captured by latent investments estimated using measures of financial resources and time invested in private education (cognitive skills) and measures of parental engagement and harmony (social and emotional skills).

The literature also suggests that higher social and emotional skills induce more learning investments. For instance, Skinner and Belmont (1993) show that students who demonstrate stronger motivation and engagement tend to receive more involvement and support from teachers. There is also evidence suggesting that children from families of higher socio-economic background tend to have higher levels of social and emotional skills (see OECD, 2013a for evidence of the positive relationship between household socio-economic status and students engagement, drive and motivation). To the extent that these families can afford to provide higher quality learning environments and quality investments for their children, those with higher levels of social and emotional skills are likely to receive higher levels of learning investments. For instance, Hart and Risley (1995) provide evidence suggesting that families of higher socio-economic status tend to talk more with their children than less affluent families.

Skills beget skills can also be explained by the fact that those with a higher level of skills benefit more from new investments in skills

Another important driving force behind "skills beget skills" may be that those with more skills have a greater capacity to benefit from a given learning environment or investments, such as intervention programmes. Smart children are likely to be better at learning from curricular activities in further developing their math or languages skills. Motivated children are also likely to become even more motivated after experiencing stimulating learning activities.

The OECD's longitudinal analysis for Korea also sheds light on this issue. Figure 4.4 describes how the productivity of developing cognitive and social and emotional skills through investment varies by levels of skills. Investment in cognitive skills is captured by measures of parental investments in private education, while investment in social and emotional skills is captured by measures of parental engagement and harmony. Using simulated skill factors and productivity of investment at age 14 in terms of an increase in skills between ages 14 and 15, they show that the higher the levels of social and emotional skills, the higher the productivity of investment in developing *both* cognitive and social and emotional skills.

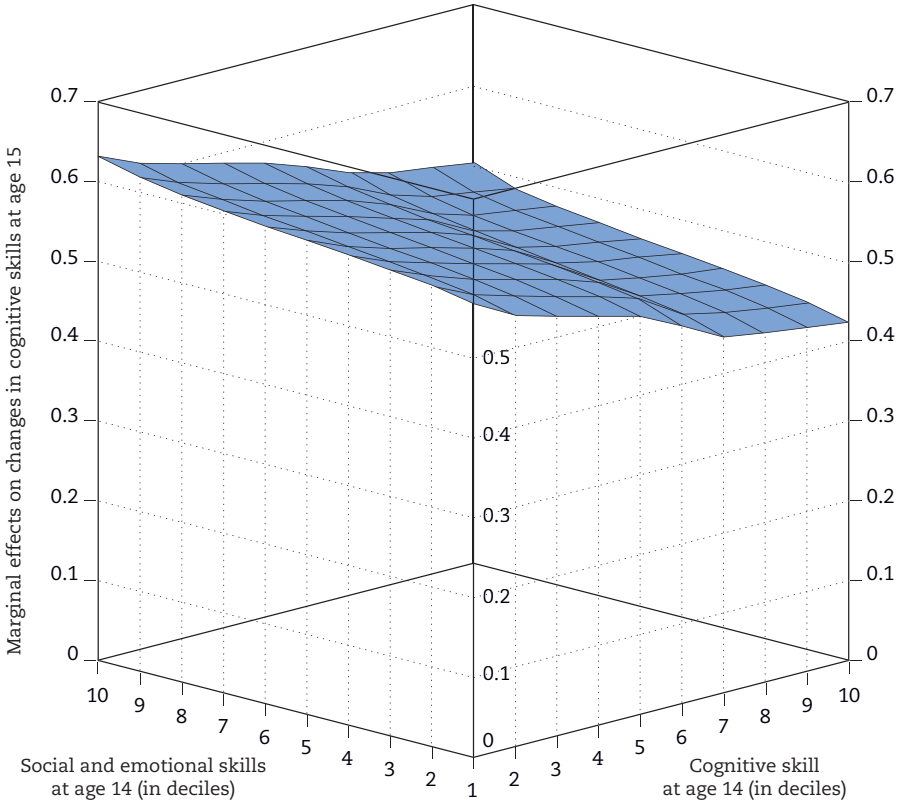
Figure 4.4 (Panel A) suggests that in Korea, a child with the highest level of social and emotional skills (i.e. 10th decile) is 7-8 percentage points more productive in producing future cognitive skills than a child with the lowest level of social and emotional skills (i.e. 1st decile). Moreover, Figure 4.4 (Panel B) suggests that a child with the highest level of social and emotional skills is 7-50 percentage points more productive in producing social and emotional skills than a child with the lowest level of social and emotional skills. The impact of raising learning investments in social and emotional skills on children's future social and emotional skills is generally much higher among those in the lower cognitive skill deciles. This implies that social and emotional skills can be a particularly important

policy-lever for disadvantaged children who lack cognitive ability. These changes can bring long-lasting and progressively increasing returns (see arguments to follow and Figure 4.5). This result is also consistent with the evidence from the United States where they show a strong positive impact of skills on the productivity of developing skills through investment (Cunha and Heckman, 2008; Cunha, Heckman and Schennach, 2012).

In short, having more social and emotional skills today can help children benefit more from learning environments and intervention programmes in the future. They can leverage these investments to enhance not only their social and emotional skills, but also their cognitive skills.

Figure 4.4. **Those with higher levels of social and emotional skills benefit more from new learning investments to further develop cognitive as well as social and emotional skills (Korea)**

Panel A. **Marginal effects of increasing learning investments made at age 14 on changes in cognitive skills between ages 14-15, by skill deciles**

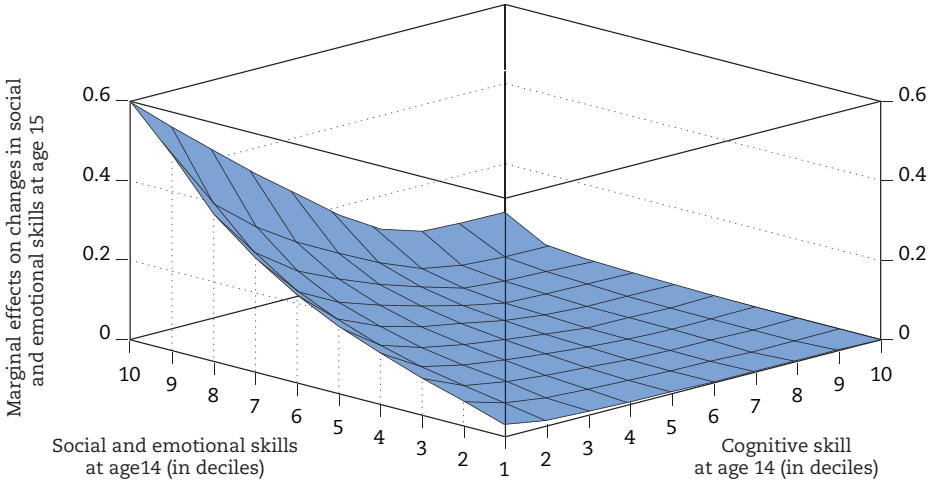


StatLink http://dx.doi.org/10.1787/888933163819

Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

Figure 4.4. **Those with higher levels of social and emotional skills benefit more from new learning investments to further develop cognitive as well as social and emotional skills (Korea)** (continued)

Panel B. **Marginal effects of increasing learning investments made at age 14 on changes in social and emotional skills between ages 14-15, by skill deciles**



Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

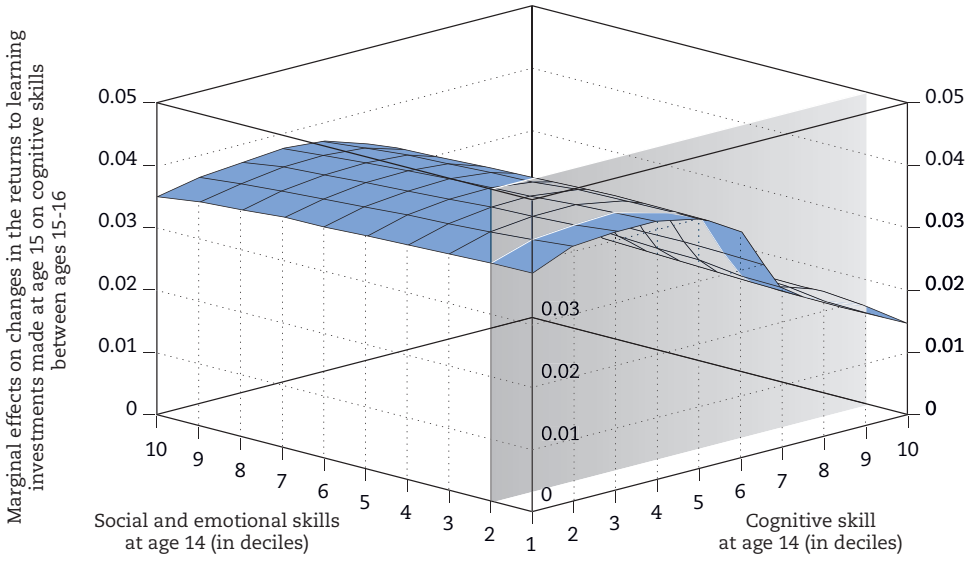
Investing in children's skills sufficiently early is important for their lifetime success

If the level of children's social and emotional skills affects the productivity of future investments in cognitive as well as social and emotional skills, investments in social and emotional skills made at any point in time must have an impact on the productivity of all future investments in skills. Early investments should therefore allow children to reap higher returns over a longer period of time.

Figure 4.5 illustrates this point by showing the impact of investments made at age 14 on the returns to investments made later: between ages 15 and 16, based on the OECD's longitudinal analysis for Korea. Panel A suggests that investments in cognitive skills at age 14 raise the impact of future investments in cognitive skills, no matter the level of skills at age 14. The positive relationship can be seen from the positive projected values ranging from 0.01-0.04. Note that, the returns are diminishing by cognitive skills, which suggests that those with lower levels of cognitive skills benefit more from investing in cognitive skills in terms of further enhancing these skills. However, Panel B suggests that an additional investment in social and emotional skills at age 14 will only enhance future investment productivity in social and emotional skills for those who have a higher level of social and emotional skills in the first place. Hence, the Korean example points to the importance of sufficiently investing in social and emotional skills (as well as cognitive skills) before early adolescence in order to allow children to reap the benefits of future investments. The economics literature calls this phenomenon "dynamic complementarities". Cunha and Heckman (2008) and Cunha, Heckman and Schennach (2012) suggest that dynamic complementarities also hold for the United States. The evidence from the early intervention literature also suggests that investments in early childhood provided by programmes such as the Abecedarian and Perry Pre-school raised the efficiency of learning in school and reduced behavioural problems many years after the initial investment (Heckman, 2008).

Figure 4.5. Investment in skills today raises the returns on future investment in skills (Korea)

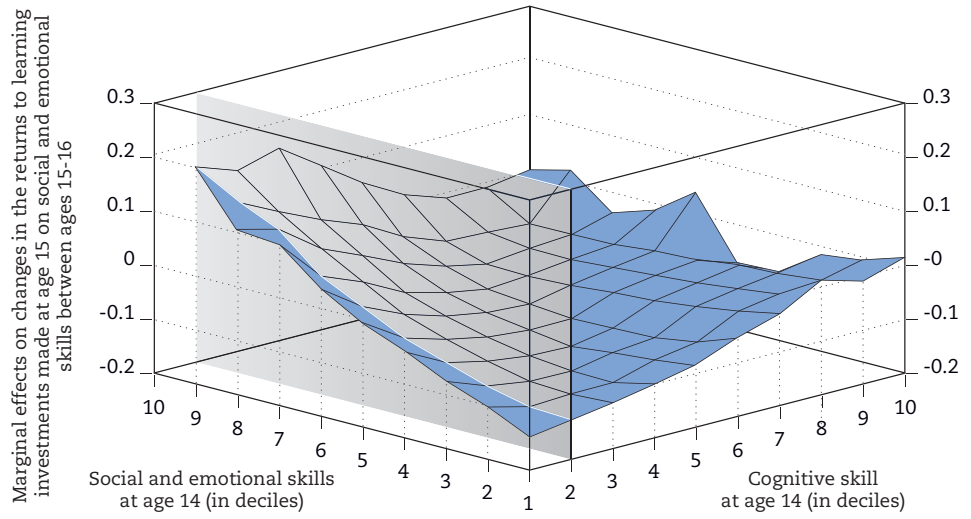
Panel A. **Marginal effects of increasing learning investments (on cognitive skills) made at age 14 on changes in the returns to learning investments (on cognitive skills) made at age 15 on cognitive skills between ages 15-16, by skill deciles**



StatLink http://dx.doi.org/10.1787/888933163821

Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

Panel B. **Marginal effects of increasing learning investments (on social and emotional skills) made at age 14 on changes in the returns to learning investments (on social and emotional skills) made at age 15 on social and emotional skills between ages 15-16, by skill deciles**



Note: Results are based on the OECD's longitudinal analysis of Korea (Box 3.1). Social and emotional skills are captured by a latent social and emotional skill factor estimated using measures of responsibility, locus of control and self-esteem at age 14. Cognitive skills are captured by a latent cognitive skill factor estimated using measures of achievement test scores and academic grades at age 14, and conditioning on the latent social and emotional skill factor. The empirical model assumes that measures of achievement test scores and academic grades are a function of latent cognitive and social and emotional skills. Investments are captured by a latent investment factor estimated using measures of financial resources and time invested in private education (for cognitive skills) and measures of parental engagement and harmony (for social and emotional skills).

While early investment is particularly important for cognitive skills, social and emotional skills can also be effectively raised between early childhood and early adolescence

Even though early investments generally bring higher and longer lasting returns, one needs to carefully consider the relative productivity of investing in skills early versus later, and its associated costs, before coming to a conclusion on the optimal timing of policy interventions (Shonkoff and Phillips, 2000). For cognitive skills, evidence, including findings from neuroscience, suggests the importance of early investment in raising general cognitive skills. However, the evidence for the optimal timing for investing in social and emotional skills is limited. The work of Cunha, Heckman and Schennach (2012) is among the few studies that sheds light on this. They compare a measure of how easy it is to compensate for low levels of skills inherited from the previous period with current levels of investment. They suggest, using longitudinal data from the United States, that while it is difficult for new investments to compensate for lack of early investments in cognitive skills (ages 0-6), it is still possible for later investments in social and emotional skills (ages 7-14) to compensate for early deficits.

This chapter primarily relied on results from the OECD's longitudinal analysis for Korea as well as very few existing evidence on this issue. The paucity of empirical studies to evaluate the dynamics of skills formation is due to the limited number of micro longitudinal data available that can be useful for such an analysis. This calls for a new development of longitudinal data on skills, learning contexts and outcomes across countries. Chapter 6 presents the OECD's proposal to collect such data in the future.

Learning contexts that drive social and emotional development

Learning takes place in a variety of contexts, including in families, schools and communities. Each context plays a critical role at different stages of children's lives. There are common elements and approaches across contexts that have proven successful in developing children's social and emotional skills. The coherence in learning contexts will likely affect how productive each of them is in shaping children's social and emotional development.

Families can play an important role in raising children's social and emotional development from birth

Families[1] can shape children's social and emotional development by providing guidance, developing habits, imparting values and sharing expectations. The OECD's longitudinal analyses for Korea suggest that parental engagement in their children's studies and efforts to maintain harmony in the family play an important role in driving children's social and emotional development during early adolescence (ages 14-16). The empirical literature also suggests that supportive and warm families that provide stimulating activities enhance children's cognitive, social and emotional skills (Baxter and Smart, 2011; Cabrera, Shannon and Tamis-LeMonda, 2007; Cunha, Heckman and Schennach, 2012). Analysis of PISA data shows that children whose parents engage in reading, writing words, telling stories and singing songs not only tend to score better in reading literacy but are also more motivated to learn (OECD, 2012). Equally, parental attitudes and disciplinary practices play an important role on influencing children's social and emotional conditions (Kiernan and Huerta, 2008). Supportive relationships that generate healthy attachments positively affect children's understanding and regulation of emotions as well as their feelings of security and tastes for exploration and learning (Noelke, forthcoming).

Numerous factors affect the extent to which parents engage in their children's social and emotional development, including children's ages, parents' socio-economic characteristics, attitudes

towards work and social expectations. An important barrier to parental involvement is the time parents devote to other activities, including employment. Having parents who work may impede parent-child bonding as it decreases the quantity and quality of time children spend with parents (Belsky et al., 1988; Belsky and Eggebeen, 1991; Noelke, forthcoming). However, parental employment also means more family income, which may positively influence children's development as it allows for the purchase of learning materials, services and experiences that potentially benefit skills formation (Conger and Elder, 1994).

Most studies have looked at the influence of maternal employment on children's outcomes, as women have traditionally been the primary carers of young children. The overall evidence suggests that maternal employment during a child's first year may have small negative effects on a child's cognitive, social and emotional development, especially if the mother is employed full time (Noelke, forthcoming). However, other factors, such as parental education, participation in formal childcare and the quality of interaction between parents and children, seem to have a greater influence on infant development than maternal employment alone (Brooks-Gunn, Han and Waldfogel, 2010; Huerta et al., 2011). The small negative effects of maternal employment are most often observed among children in two-parent families, with highly educated parents (Gregg et al., 2005; Huerta et al., 2011; Noelke, forthcoming). Children growing up in affluent families may have more to lose when parents are in paid work, because the alternative care they receive may be inferior to that of their parents. Conversely, maternal employment may be less harmful for disadvantaged children, as the reduction in time spent with the child is counter-balanced by additional income, reduced stress and access to formal childcare (OECD, 2011; Noelke, forthcoming).

Schools can further enhance children's social and emotional skills by introducing innovations in teaching and learning through curricular and extracurricular activities

As children grow older, schools become more important to the process of skills formation. Schools can provide innovative curricular and extracurricular activities conducive to social and emotional development (Chapter 5). Teachers can play a particularly important role in raising children's self-esteem, motivation and emotional stability by being effective mentors and learning facilitators. Peers can also play a role, as children can learn a variety of social and emotional skills such as collaboration, negotiation and sociability from friends and classmates.

While there are a large number of independent programmes designed, in part, to raise social and emotional skills, none of these programmes have been subject to rigorous or long-term evaluations. Kautz et al. (2014) provide three examples of US-based programmes, albeit with only short-term evaluations, in Box 4.1.

Evidence from a large-scale meta-analysis of school-based interventions on social and emotional learning (SEL) in the United States also documents numerous lessons. First, SEL programmes have significant positive effects on social and emotional skills such as goal setting, conflict resolution and decision making. Second, classroom teachers and other school staff can drive successful SEL programmes. Third, SEL interventions can be incorporated into routine educational practices. Fourth, these interventions may be successful at all educational levels (elementary, lower secondary and upper secondary). Fifth, effective SEL programmes need to incorporate learning practices with sequenced training, active forms of learning, focus time and attention to any skill development tasks, and explicit learning objectives (the SAFE [sequenced, active, focused and explicit] principle) (Durlak et al., 2011). The most effective programmes are those that incorporate all four SAFE practices (Durlak, 2003; Durlak, Weissberg and Pachan, 2010; Durlak et al., 2011). The value of SAFE practices is also observed in a review of after-school programmes (Durlak, Weissberg and Pachan, 2010).

Box 4.1. Programmes designed to raise social and emotional skills in the United States

Kautz et al. (2014) present three examples of US-based programmes designed, in part, to raise social and emotional skills. To date, only short-term evaluations have been carried out and are showing positive results.

The first is "Tools of the Mind", which attempts to teach preschool and early-primary schoolchildren to regulate their social and cognitive behaviour. The programme employs a curriculum that encourages children to role-play and learn in groups with other children. Short-term evaluations suggest positive outcomes, including improvements in classroom behaviour and executive functioning which includes inhibitory control.

The second is a low-cost programme designed to enhance the "Mindset" of children in such a way that children believe capabilities are malleable and that learning can change the structure of the brain (Dweck, 2007). This programme aims to instil the idea that achievement is the result of hard work rather than inborn intelligence.[1] Indeed, PISA 2012 (OECD, 2013b) shows that children who think that hard work is key to success, rather than stable intelligence, perform better in the PISA mathematics test. While the main goal of the Mindset experiment is to promote educational achievement, the process involves enhancing social and emotional skills such as perseverance and willpower. As with the previous example, short-term results were favourable.

The third is the OneGoal programme, which selects and trains high-school teachers to help students apply to colleges, improve grades and test scores, and persist through college by cultivating social and emotional skills. This programme serves low-income schools in Chicago, most of which have college enrolment rates of less than 50%. Short-term evaluations have again proved successful and improved academic indicators in high school and boost high-school graduation and college enrolment.

Note: 1. In addition, students whose teachers use cognitive-activation techniques, such as asking students questions that help them reflect on the problem, presenting problems that can be solved in several different ways, or helping children learn from their mistakes, is associated with higher student perseverance and openness to problem solving in mathematics. Thus, the ways in which the pedagogical content is framed and presented has a great impact on how students develop and employ their cognitive and socio-emotional skills.

Source: Kautz, T. et al. (2014), "Fostering and Measuring Skills: Improving Cognitive and Non-cognitive Skills to Promote Lifetime Success", *OECD Education Working Papers*, No. 110, OECD Publishing, http://dx.doi.org/10.1787/5jxsr7vr78f7-en.

Extracurricular activities also offer ample opportunities for children to develop social and emotional skills by engaging in sports, music, arts and even academic activities in an informal context involving interactions with peers and facilitators. They are expected to have a positive influence on students' social and emotional skills, while also meeting other purposes including students' academic, cultural and physical development. Participation in sports activities, art clubs or drama clubs can increase a number of social and emotional skills among children, including discipline, ability to work as a team and curiosity (Covay and Carbonaro, 2010).

The effect of athletic participation on social and emotional skills has been studied widely. Evidence suggests positive effects of athletic participation, although the effects are relatively small. Lewis' (2004) meta-analysis suggests that sports activities have a weak but significant association with a decrease in risk behaviours: those students who participate in sport activities are less likely to exhibit substance abuse and aggressive behaviour. The analysis also indicates that sports activities are related to higher levels of self-esteem and self-efficacy. Bailey (2006) suggests that the extent to which physical education benefits skill development depends on three aspects, namely whether the programme: 1) promotes enjoyment, diversity and the engagement of all; 2) is taught by committed and trained teachers and coaches; and 3) is supported by informed parents.

There are also studies suggesting that performing arts activities such as theatre and dance activities can enhance social and emotional skills, such as self-esteem, self-control, perseverance, social skills, emotion regulation and sympathy (for a review of the studies see Winner, Goldstein and Vincent-Lancrin, 2013).

Across OECD countries, students commonly participate in school governance and classroom management, which are alternative forms of extracurricular activities. Students can become classroom representatives or participate in student councils, which can develop the skills necessary for exercising democracy, such as negotiating, teamwork and taking responsibility (Taylor and

Johnson, 2002). Studies have found that students' involvement in student council is a good predictor of their future political engagement (Davies et al., 2006). Students can also take on classroom tasks, which can raise their self-efficacy and sense of responsibility.

Pro-social activities are also expected to promote children's abilities to take initiative, self-regulate, believe in oneself and work with others. In particular, service learning that combines classroom instruction and community services has been increasingly adopted as a teaching method, as studies also demonstrate positive effects of such instruction. For example, a meta-analysis of studies on service learning suggests significant gains from service learning programmes in academic performance, social skills, civic engagement, and attitudes towards self, school and learning (Celio, Durlak and Dymnicki, 2011).

Most schools may not have the capacity to introduce major innovations in curricular and extracurricular activities, due to resource constraints. They may, however, be able to adapt existing practices at the margin and introduce innovative practices to foster social and emotional skills without major changes. Evidence suggests that social and emotional skills can be effectively taught within standard subjects like maths and language if the curriculum explicitly integrates these skills in the learning process (Trilling, forthcoming). For instance, this can be done by introducing project-based work that involves dynamic and interactive problem solving based on real-life problems. Project-based (or problem-based) approaches require clear goals and guidance, as well as resources (such as access to libraries, museums, etc.) and multidimensional assessments that would target the diverse skills children should acquire (Barron and Darling-Hammond, 2008). While these innovations can be introduced at the margin, they will still require system-wide support from school principals, teachers and parents.

Teachers are likely to drive children's success in developing social and emotional as well as cognitive skills. While this may seem obvious, no evaluation study has identified the characteristics of teachers that drive success in character development. One study implies the potentially important role teachers may play in enhancing social and emotional skills. Jackson (2013), using data from North Carolina, United States, showed that 9th grade maths and English teachers causally influence their students' cognitive as well as social and emotional skills, as measured by student absences, suspensions, grades and on-time grade progression. Jackson estimates teachers have a bigger effect on social and emotional skills than on cognitive skills. Moreover, this study shows that teachers' abilities to influence cognitive skills and social and emotional skills are largely independent, implying that some teachers may be particularly good at shaping children's social and emotional skills, but not necessarily as good at shaping their cognitive skills, and vice versa. This suggests the existence of certain teacher characteristics that may be particularly conducive to enhancing social and emotional skills.

Communities can further enhance social and emotional skills by providing valuable contexts for informal learning

The most important component of community learning contexts is informal learning. Informal learning, involving a range of extracurricular, civic and cultural activities outside of schools, is associated with positive changes in students' academic, social and citizenship outcomes (Conway, 2009). Children who participate in performing arts and pro-social activities are more likely to have positive identities and higher self-esteem (Lewis, 2004). Informal learning relies on the availability of out-of-school community activities. It is therefore linked to the level of community resources and characteristics such as socio-economic status and peer values. Moreover, parents' social networks can affect the quality and intensity of children's informal learning opportunities. Sampson, Morenoff and Earls (1999) argue that networks of parents' friends can be an effective neighbourhood resource for skills formation. Other parents may not only provide direct social support and parenting information, but also help reinforce desired norms and behaviours (Noelke, forthcoming).

Intervention programmes provide valuable means for disadvantaged children to develop social and emotional skills

There is considerable evidence suggesting children's cognitive, social and emotional skills can be negatively affected when they grow up in disadvantaged learning contexts (Shonkoff and Phillips, 2000; Feinstein, 2003; Schady et al., 2014). Low incomes are associated not only with a lack of resources to buy goods and services that benefit skills formation, but also with parental stress and parenting behaviours that are less responsive to children's needs (Elder and Caspi, 1988). Moreover, recent evidence suggests that the stress associated with growing up in poverty negatively affects children's brain development and brain functioning in adulthood (Angstadt et al., 2013). Intervention programmes, therefore, have significant scope to enhance social and emotional skills among disadvantaged children so that they can better navigate through their challenging environments and eventually achieve social mobility.

Table 4.2 provides a list of promising intervention programmes described in Kautz et al. (2014), complemented by additional programmes outside the United States, as identified by the OECD. The list contains programmes that have been rigorously evaluated and proven to have directly or indirectly raised social and emotional skills. The table is designed to highlight the main characteristics of the programmes, including target groups, location, contexts and targeted skills.

Successful early childhood and childhood interventions tend to emphasise positive parent-child attachment, and directly involve parents in training programmes

Table 4.2 presents a number of early childhood and childhood intervention programmes that have successfully enhanced children's social and emotional skills (particularly social skills and emotional regulation) and subsequent adult outcomes. The table suggests that most of the successful programmes launched to tackle family poverty have been designed to involve both children and parents. Hence, these programmes have mostly taken place in both schools/centres and at home.

Strong family involvement, parent-child interactions and parental training are common features of all the promising programmes highlighted in Table 4.2. Parental training that provides guidance on parenting styles and practices designed to enhance secure attachment may be an effective strategy to improve children's outcomes. Indeed, the evidence shows that children whose parents are warm, firm and fair tend to be more psychologically mature and less prone to internalising or externalising their problems than their peers whose parents use other parenting styles (Steinberg, Blatt-Eisengart and Cauffman, 2006; Steinberg, 2004). Parental training is often complemented by professional counselling sessions for mothers and other family members.

Outside the United States, there are a number of early childhood interventions, but few of them have undergone rigorous evaluations. A good example of an early childhood intervention is the Sure Start Programme in the United Kingdom. This targeted intervention is associated with improvements in 7 out of 14 desirable outcomes, including children's social and emotional development (NESS, 2008). For instance, children participating in the Sure Start programme showed more positive social behaviour, and greater independence and self-regulation than their peers who did not participate in the programme. This programme also emphasised family involvement and offered parental training courses. In spite of these findings, the Sure Start Programme is not amenable to rigorous evaluations, as the subjects were not randomly assigned.

Promising childhood programmes such as Project STAR and the Seattle Social Development Project (SSDP) share many features of successful early childhood programmes. Family involvement is the most frequently recurring element of these interventions. Moreover, there is a strong emphasis on teacher training. For example, teachers involved in SSDP receive intensive training in classroom management, co-operative learning and interactive teaching. Other courses such as behavioural management are provided in order to teach teachers how to help children resolve conflicts with their peers and, as a result, develop problem-solving skills.

Table 4.2. **Enhancing social and emotional skills: Promising intervention programmes in selected countries**

Programme	Purpose	Target		Location			Contents									Skills targeted
		Child	Parents	School/ centre	Home	Work	Family involvement	Parent-child attachment	Mentor[1]	Guidance [2], counsellor	Parental training	Trained teachers	Social services	Work training	Health services[3]	
Early childhood																
Nurse-Family Partnership (United States)	Poverty reduction	Prenatal to Age 1	●		●		●			●	●		●		●	Vocabulary skills, internalising behaviour reduction, anti-social behaviour prevention
Abecedarian Project (United States)	Poverty reduction	Age 0	●	●	●		●	●		●					●	Externalising behaviour reduction, anti-social behaviour prevention, academic skills
Supplementation Study (Jamaican)	Health	Age 1-2	●		●			●			●				●	Self-esteem, emotional regulation, anti-social behaviour and oppositional behaviour reduction
Head Start Program (United States)	Poverty reduction	Age 3-5	●	●	●		●				●		●		●	Social relationships, self-concept, self-efficacy, self-regulation, emotional regulation, academic skills
Perry Preschool Program (United States)	Poverty reduction, IQ	Age 3-4	●	●	●		●	●								Externalising behaviour reduction, academic motivation, IQ
Chicago Child Parent Center (United States)	Poverty reduction	Age 3-4	●	●			●	●			●	●			●	Anti-social behaviour prevention, emotional regulation, academic skills, IQ
Sure Start Programme (United Kingdom)	Poverty reduction	Age 3-4	●	●			●				●				●	Social behaviour (co-operation, sharing, empathy), child independence/self-regulation

Table 4.2. **Enhancing social and emotional skills: Promising intervention programmes in selected countries** (continued)

Programme	Purpose	Target		Location			Contents									Skills targeted
		Child	Parents	School/ centre	Home	Work	Family involvement	Parent-child attachment	Mentor[1]	Guidance [2], counsellor	Parental training	Trained teachers	Social services	Work training	Health services[3]	
Childhood																
Project STAR (United States)	Education quality enhancement	Age 5-6	●	●			●	●				●				Anti-social behaviour prevention, student effort, initiative, non-participatory behaviour, self-"value" in the classroom, IQ
Seattle Social Development Project (United States)	Crime prevention	Age 6-7	●	●			●				●	●			●	Communication, decision-making, negotiation and conflict-resolution skills
Montreal Longitudinal Experimental Study (Canada)	Crime prevention	Age 7-9	●	●			●				●					Social and behavioural skills: positive interactions with teachers, parents and peers; problem-solving and self-regulation
Adolescence																
Big Brothers Big Sisters (United States)	Poverty reduction	Age 10-16					●		●							Self-worth, self-confidence, motivation, social acceptance and behaviour, anti-social behaviour prevention, academic skills
Entrepreneurs for Social Inclusion (Portugal)	Dropout rates reduction	Age 13-15		●						●		●				Motivation, self-control, problem-solving skills, social skills
Becoming a Man (United States)	Dropout rates reduction and violence prevention	Age 15-16		●					●	●						Social-cognitive skills: impulse control, emotional self-regulation, conflict resolution, raising aspirations for the future and sense of personal responsibility

Table 4.2. **Enhancing social and emotional skills: Promising intervention programmes in selected countries** (continued)

Programme	Purpose	Target		Location			Contents									Skills targeted
		Child	Parents	School/ centre	Home	Work	Family involvement	Parent-child attachment	Mentor[1]	Guidance [2], counsellor	Parental training	Trained teachers	Social services	Work training	Health services[3]	
Pathways to Education (Canada)	Dropout rates reduction	Age 15-18		●			●		●	●						Academic and social skills: problem-solving, team building, communication and negotiation
National Guard Challenge (United States)	Dropout rates reduction	Age 16-18		●											●	Confidence and responsibility, feeling of self-control, sense of leadership and potential, academic skills
Job Corps (United States)	Poverty reduction	Age 16-24		●					●						●	Interpersonal communication, problem solving, social and management skills, technical, academic skills
Youth Employment Program (Dominica)	Employability	Age 16-28		●		●			●					●		Self-esteem, problem solving, decision making, conflict resolution, empathy, co-operation, responsibility, emotions control, risk behaviour reduction, communication, creative thinking
Year-up (United States)	Employability	Age 18-24		●		●				●				●		Time management, teamwork, problem solving, conflict resolution and technical skills
Joven/Young Program (Chile)	Employability	Age 18-25		●		●				●				●		Social skills, technical skills, academic skills

Note: 1. Mentoring focuses on career and personal development. Mentoring is about sharing information, experience and giving and receiving advice and guidance. It is an ongoing relationship that can last for a rather long period of time. 2. Counselling is about an employee's behaviour. It is used to address psycho-social issues, but also performance-related issues when an individual's behaviour appears to affect his/her performance. It is often a short-term intervention. 3. Health services refers to medical (e.g. immunisation treatment), mental health services and/or nutrition training, depending on the interventions. Kautz et al. (2014) provides source data and documentations for this table.

Successful adolescent intervention programmes emphasise mentoring through hands-on work experience

Adolescence is a period of turbulent biological, physiological and social changes. As a result, it is also the period in which many choose to pursue negative, anti-social behaviours. Adolescents tend to take more risks than adults, which can pose difficulties for carrying out successful interventions (Steinberg, 2004). In this context, mobilising programmes to help improve adolescents' social and emotional skills, such as self-discipline or resilience, can be one way to help them make the right choices.

However, the limited numbers of interventions targeting adolescents are all US-based, and often lack rigorous evaluations to establish their long-term effects. Among the few existing programmes, there is some evidence of the importance of mentoring, specifically for structuring the learning experience, teaching discipline by example, and providing scaffolding against which young people can acquire the skills they need through imitation and observation (Kautz et al., 2014). In addition, the workplace also offers good opportunities to learn the right skills, particularly for young people not in school. Workplace training can teach adolescents the importance of such skills as teamwork, efficacy and motivation. It can also instil them with a sense of occupational identity (Rauner, 2007).

A salient characteristic of successful adolescent programmes targeting youth employability is the value they place on the combination of hands-on work experience and life skills development. The Dominican Youth Employment Program, for instance, provides both classroom training and the opportunity to learn on the job. Classroom training is composed of vocational and life skills training, including the promotion of self-esteem, motivation and communication skills. Successful programmes ensure that the content of the vocational training is agreed with local employers to make sure the skills acquired are relevant. These skills are further enhanced during participants' apprenticeships and through on-the-job guidance. Mentoring is commonly practised in a variety of successful interventions aimed at adolescents, including those focused on drop-out rate reduction (e.g. the Big Brothers Big Sisters programme), and getting young people into work.

Conclusion

Social and emotional skills develop progressively, building on skills formed during early childhood and mobilising new investments through innovative learning environments and interventions. The evidence suggests that investments in social and emotional skills should start early for everybody. Investing in these skills sufficiently early for disadvantaged children is an important way to reduce socio-economic inequalities. Social and emotional skills are particularly malleable between early childhood and adolescence. Early development of social and emotional skills helps develop future cognitive as well as social and emotional skills.

Skills development must be holistic and coherent, meaning there are important roles for families, schools and communities to play in skills development, and they need to be consistent to ensure the efforts made in each context are efficient. School-based practices can be improved incrementally by introducing real-life projects into existing curricular activities. Successful school programmes tend to be sequenced, active, focused and employ explicit learning practice. Existing programmes can be improved by promoting positive relationships between parents and children as well as between mentors and children. The evidence from intervention programmes targeted at disadvantaged groups provides similar conclusions. Interventions should start early, be targeted to all stakeholders including families and schools, and involve a strong training component for parents as well. Successful interventions also emphasise the importance of reliable and supportive relationships between mentors (parents and teachers) and children.

Note

1. In this section, the discussion centres around parents; however, other family members, including siblings and grandparents play an important role in child development. The role of grandparents is becoming increasingly important as many of them act as a complement (or sometimes as a substitute) to parental and formal childcare. It is clear that the relationship with grandparents and siblings can contribute to shaping children's social and emotional skills. However, there is less research in this area.

References

Angstadt, M. et al. (2013), "Effects of childhood poverty and chronic stress on emotion regulatory brain function in adulthood", *Proceedings of the National Academy of Sciences of the United States of America,* Vol. 110, No. 46, pp. 18442-18447.

Bailey, R. (2006), "Physical education and sports in school: A review of benefits and outcomes", *Journal of School Health,* Vol. 76, No. 8, pp. 397-401.

Barron, B. and L. Darling-Hammond (2008), "Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning", The George Lucas Educational Foundation, www.edutopia.org/pdfs/edutopia-teaching-for-meaningful-learning.pdf.

Baxter, J. and D. Smart (2011), "Fathering in Australia among couple families with young children", *Occasional Paper,* No. 37, Department of Families, Housing, Community Services and Indigenous Affairs, Australian Government, Canberra.

Belsky, J. and D. Eggebeen (1991), "Early and Extensive Maternal Employment and Young Children's Socioemotional Development: Children of the National Longitudinal Survey of Youth", *Journal of Marriage and the Family,* Vol. 53, pp. 1083-1099.

Belsky, J. et al. (1988), "The 'effects' of infant day care reconsidered", *Early Childhood Research Quarterly,* Vol. 3, No. 2, pp. 235-272.

Brooks-Gunn, J., W. Han and J. Waldfogel (2010), "First-year maternal employment and child development in the first 7 years", *Monographs of the Society for Research in Child Development,* Vol. 75, No. 2, pp. 144-45.

Cabrera, N.J., J.D. Shannon and C. Tamis-LeMonda (2007), "Fathers' influence on their children's cognitive and emotional development: From toddlers to pre-k", *Applied Developmental Science,* Vol. 11, No. 4, pp. 208-13.

Celio, C.I., J. Durlak and A. Dymnicki (2011), "A meta-analysis of the impact of service-learning on students", *Journal of Experiential Education,* Vol. 34, No. 2, pp. 164-181.

Conger, R. and G.H. Elder (1994), *Families in Troubled Times: Adapting to Change in Rural America,* Aldine de Gruyter Publishing, New York, NY.

Conway, A. (2009), *An Investigation into the Benefits of Extracurricular Activities Like Clubs and Societies to Students and Colleges: Are These Benefits Evident in the Opinions and Perceptions of Staff and Students in DIT?,* Dublin Institute of Technology.

Covay, E. and W. Carbonaro (2010), "After the bell: participation in extracurricular activities, classroom behavior, and academic achievement", *Sociology of Education,* Vol. 83, No. 1, pp. 20-45.

Cunha, F. and J.J. Heckman (2008), "Formulating, identifying and estimating the technology of cognitive and noncognitive skill formation", *Journal of Human Resources,* Vol. 43, No. 4, pp. 738-782.

Cunha, F., J.J. Heckman and S. Schennach (2012), "Estimating the technology of cognitive and noncognitive skill formation", *Econometrica,* Vol. 78 (3), pp. 883-931.

Davies, L. et al. (2006), *Inspiring Schools: A Literature Review: Taking up the Challenge of Pupil Participation,* Carnegie Young People Initiative, Esmee Fairbairn Foundation, London.

Durlak, J.A. (2003), "The long-term impact of preschool prevention programs: A commentary", *Prevention & Treatment,* Vol. 6, No. 1.

Durlak, J. et al. (2011), "The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions", *Child Development,* Vol. 82, No. 1, pp. 405-432.

Durlak, J.A., R.P. Weissberg and M. Pachan (2010), "A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents", *American Journal of Community Psychology,* Vol. 45, pp. 294-309.

Dweck, C. (2007), *Mindset,* Ballantine Books, New York, NY.

Elder, G.H. and A. Caspi (1988), "Economic stress in lives: Developmental perspectives", *Journal of Social Issues,* Vol. 44, No. 4, pp. 25-45.

Feinstein, L. (2003), "Inequality in the early cognitive development of British children in the 1970 cohort", *Economica,* Vol. 70, No. 277, pp. 73-97.

Gregg, P. et al. (2005), "The effects of a mother's return to work decision on child development in the United Kingdom", *The Economic Journal,* Vol. 115, pp. F48-F80.

Hart, B. and T. R. Risley (1995), *Meaningful Differences in the Everyday Experience of Young American Children,* Brookes Publishing, University of Michigan, Ann Arbor, MI.

Heckman, J.J. (2008), "Schools, skills and synapses", *Economic Inquiry,* Vol. 46, No. 3, pp. 289-324.

Huerta, M. et al. (2011), "Early maternal employment and child development in five OECD countries", *OECD Social, Employment and Migration Working Papers,* No. 118, OECD Publishing, Paris, http://dx.doi.org/10.1787/5kg5dlmtxhvh-en.

Jackson, C. K. (2013), "Non-cognitive ability, test scores, and teacher quality: Evidence from 9th grade teachers in North Carolina", *NBER Working Paper,* No. 18624.

Kautz, T. et al. (2014), "Fostering and Measuring Skills: Improving Cognitive and Non-cognitive Skills to Promote Lifetime Success", *OECD Education Working Papers*, No. 110, OECD Publishing, http://dx.doi.org/10.1787/5jxsr7vr78f7-en.

Kiernan, K. and M. Huerta (2008), "Economic deprivation, maternal depression, parenting and child's cognitive and emotional development in early childhood", *The British Journal of Sociology,* Vol. 59, No. 4, pp. 783-806.

Lewis, C.P. (2004), *The Relation Between Extracurricular Activities with Academic and Social Competencies in School Age Children: A Meta-Analysis,* Texas A&M University, TX.

NESS (2008), "The Impact of Sure Start Local Programmes on Three Year Olds and Their Families", Report 27, National Evaluation of Sure Start Research Team, Department for Education and Skills, London.

Noelke, C. (forthcoming), *The Effects of Learning Contexts on Skills,* OECD, Paris.

OECD (2013a), *PISA 2012 Results: Ready to Learn (Volume III): Students' Engagement, Drive and Self-Beliefs,* PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201170-en.

OECD (2013b), PISA 2012 Results in Focus: What 15-Year-Olds Know and What they can Do With What they Know: Key Results from PISA 2012, OECD Publishing, Paris, http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf.

OECD (2012), *Let's Read Them a Story! The Parent Factor in Education,* PISA, OECD Publishing, http://dx.doi.org/10.1787/9789264176232-en.

OECD (2011), *Doing Better for Families,* OECD Publishing, http://dx.doi.org/10.1787/9789264098732-en.

Rauner, F. (2007), "Vocational education and training: A European perspective", in A. Brown, S. Kirpal and F. Rauner (eds.), *Identities at Work,* Springer, Dordrecht.

Sampson, R.J., J.D. Morenoff and F. Earls (1999), "Beyond social capital: Spatial dynamics of collective efficacy for children", *American Sociological Review,* Vol. 64, No. 5, pp. 633-660.

Schady, N. et al. (2014), "Wealth gradients in early childhood cognitive development in five Latin American countries", *Policy Research Working Paper,* No. 6779, The World Bank, Washington.

Shonkoff, J.P. and D.A. Phillips (2000), *From Neurons to Neighborhoods: The Science of Early Childhood Development,* Committee on Integrating the Science of Early Childhood Development, National Academies Press, Washington, D.C.

Skinner, E.A. and M.J. Belmont (1993), "Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year", *Journal of Educational Psychology,* Vol. 85, No. 4, pp. 571-581.

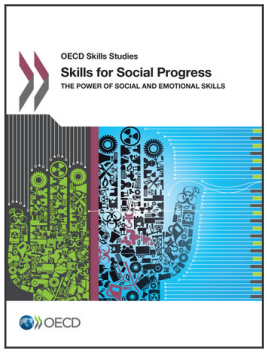
Steinberg, L. (2004), "Risk-taking in adolescence: What changes, and why?", *Annals of the New York Academy of Sciences,* Vol. 1021, pp. 51-58.

Steinberg, L., I. Blatt-Eisengart and E. Cauffman (2006), "Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful homes: A replication in a sample of serious juvenile offenders", *Journal of Research on Adolescence,* Vol. 16, No. 1, pp. 47-58.

Taylor, M. and R. Johnson (2002), *School Councils: Their Role in Citizenship and Personal and Social Education,* National Foundation for Educational Research, Slough.

Trilling, B. (forthcoming), "Roadmaps to deeper learning", in *Pathways to Deeper Learning,* Solution Tree Press, Bloomington, IN.

Winner, E., T. Goldstein and S. Vincent-Lancrin (2013), *Art for Art's Sake?: The Impact of Arts Education,* Educational Research and Innovation, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264180789-en.



From:

Skills for Social Progress

The Power of Social and Emotional Skills

Access the complete publication at:

https://doi.org/10.1787/9789264226159-en

Please cite this chapter as:

OECD (2015), "Learning contexts that drive skill formation", in *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/9789264226159-7-en