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Fostering social and emotional skills through families, schools and communities: Summary of international evidence and implication for Japan's educational practices and research

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FOSTERING SOCIAL AND EMOTIONAL SKILLS THROUGH FAMILIES, SCHOOLS AND COMMUNITIES

Summary of international evidence and implication for Japan's educational practices and research

By Hiroko Ikesako and Koji Miyamoto, OECD

OECD Education Working Paper no. 121

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ABSTRACT

Social and emotional skills, such as perseverance, sociability and self-esteem, help individuals face the challenges of the 21st century and benefit from the opportunities it brings. Policy makers, teachers and parents can help foster these skills by improving the learning environments in which they develop. This paper reviews international evidence, including those from Japan, to better understand the learning contexts that can be conducive to children's social and emotional development. It sheds light on features that underlie successful learning programmes including intervention studies. Reviewed evidence suggests that there are important roles for families, schools and communities to play in enhancing children's social and emotional skills, and that coherence across multiple learning contexts needs be ensured. While most of the evidence comes from the United States and the United Kingdom, the paper suggests that further efforts could be made in Japan in collecting and better exploiting micro-data on a range of social and emotional skills, as well as in evaluating effectiveness of interventions designed to raise social and emotional skills.

RÉSUMÉ

Les compétences socio-affectives, telles que la persévérance, la sociabilité et l'estime de soi, aident les individus à faire face aux défis du XXI^{e} siècle et à tirer profit des opportunités qu'il offre. Les décideurs, les enseignants et les parents peuvent favoriser le développement de ces compétences en améliorant les environnements d'apprentissage au sein desquels se fait leur acquisition. Ce document examine les données internationales, notamment celles du Japon, afin de mieux identifier les cadres d'apprentissage susceptibles d'être propices à l'acquisition des compétences socio-affectives chez l'enfant. Il met au jour les caractéristiques sous-tendant la réussite des programmes d'apprentissage incluant des études d'intervention. L'analyse des données met en évidence le rôle important que peuvent jouer les familles, l'école et la collectivité dans le développement des compétences socio-affectives chez l'enfant, et la nécessité de garantir la cohérence entre les différents cadres d'apprentissage. Si la plupart des données viennent des États-Unis et du Royaume-Uni, ce document suggère que des efforts supplémentaires pourraient être faits au Japon pour collecter et mieux exploiter des micro-données sur un ensemble de compétences socio-affectives, ainsi que pour évaluer l'efficacité des interventions visant à renforcer ces compétences.

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EXECUTIVE SUMMARY

Education has great potential to address the challenges of the 21st century by enhancing a variety of individual's skills. In particular, social and emotional skills can play an important role in driving social outcomes such as health, civic engagement and well-being. Children are not born with a fixed set of social and emotional skills, and some of these skills are malleable. Policy makers, teachers and parents can help facilitate children's skill development by improving the learning environments in which they develop. paper reviews international evidence, including those from Japan, with the aim of better understanding the learning contexts that can be conducive to children's social and emotional development.

Social and emotional skills can be defined as: "individual capacities that can be (a) manifested in consistent patterns of thoughts, feelings and behaviours, (b) developed through formal and informal learning experiences and (c) important drivers of socio-economic outcomes throughout the individual's life." These skills include capacities to achieve goals (e.g. perseverance, motivation, self-regulation and self-efficacy), work with others (e.g. social skills, cooperativeness, trust and empathy) and manage emotions (e.g. self-esteem, self-confidence, low risk of internalising and externalising problem behaviours).

The paper has identified several learning contexts that may be conductive to enhancing social and emotional skills. First, home learning contexts can play an important role, as a number of studies point to the benefits of strong parent-child attachments. Some studies also suggest that parent's socio-economic situations and emotional conditions may affect their capacity to provide a socio-emotionally nurturing environment. Successful early childhood programmes and school-based programmes tend to offer parental training sessions to enhance parenting skills.

Second, schools can help improve students' social and emotional skills by mobilising curricular and extra-curricular activities. Curricular activities can strengthen children's social and emotional skills by introducing a set of lessons specifically designed to enhance social and emotional skills, as well as teaching strategies designed to enhance children's social and emotional skills through existing core academic curricular subjects. Schools may also usefully mobilise extra-curricular activities as well as practical experience in engaging in society (e.g. volunteering) and the labour market (e.g. apprenticeships). Moreover, they may help enhance students' social and emotional skills through improving school and classroom climate and effectively employing peer-support approaches.

Third, communities can offer various real-life settings which provide a motivating learning ground for children to acquire social and emotional skills. Some volunteering and outdoor programmes, when they are well designed, have been shown to effectively enhance children's social and emotional skills.

Lastly, a number of successful programmes designed to elevate social and emotional skills involve enhancement of multiple learning contexts including family, school and community. These programmes can provide not only opportunities for children to experience enhanced learning, but also for adults (e.g. parents, teachers and mentors) to receive appropriate training. Such a holistic approach to social and emotional development may help ensure that (a) programme objectives are shared across all stakeholders, (b) social and emotional learning approaches are coherent across contexts and (c) the knowledge and skills of all care providers are augmented.

While most of the evidence comes from the United States and the United Kingdom, the international research community may usefully continue their efforts to expand studies based on a range of rigorous evaluation of intervention programmes and on large-scale longitudinal data that cover different population groups. This paper suggests that further efforts could be made by the research community in Japan in collecting and better exploiting micro-data on a range of social and emotional skills, as well as in evaluating effectiveness of interventions in raising social and emotional skills.

CHAPTER 1. INTRODUCTION

Children are not born with a fixed set of social and emotional capabilities. Some of these skills are malleable, and policy makers, teachers and parents can play an important role in improving the learning environments in which they develop. The purpose of this paper is to better understand the learning contexts that can be conducive to children's social and emotional development. The analysis is based on international evidence including those from Japan. This will allow us to understand whether the emerging evidence from Japan is consistent with those coming from international sources, or is characterised by unique features. The evidence may also provide useful implications for education practices and research in Japan as well as in other countries.

The importance of social and emotional skills for the lifetime success of children

Today's socio-economic climate brings new challenges that affect the future of children. Although access to education has improved considerably, a good education alone no longer secures a job; youth have been particularly affected by rising unemployment following the economic crisis in 2008. Problems such as obesity and declining civic engagement are also increasing while the ageing population and the environmental outlook are cause for concern. Moreover, inequalities in labour markets and social outcomes appear to be widening.

Education has great potential to address these challenges by enhancing a variety of individual's skills. Cognitive skills matter, but social and emotional skills, such as perseverance, self-control and resilience are just as important. Research suggests that social and emotional skills can play a particularly important role in driving social outcomes such as health, civic engagement and well-being (see OECD, 2010, 2015 for a summary of the literature). Benefit-cost analyses of several prominent intervention programmes for social and emotional learning show that there is a substantial economic return to investment in these programmes through higher tax revenues and lower costs of public services for health, public assistance, and criminal justice (Belfield et al., 2015).

Contrary to popular misconceptions, children do not possess a fixed set of abilities with little room for improvement. They are not born as a "maths person", a "creative person" or an "attentive person". Children begin their lives with considerable potential to develop these abilities. Whether they flourish or not depends on the learning contexts that they are exposed to between early childhood and adolescence. Evidence suggests that this is due to the vast plasticity of the brain, i.e. its enormous capacity to learn, change and develop, during this period (Knudsen et al., 2006). Skills beget skills – early accumulation of skills becomes a foundation for future skill development.

Cognitive, social and emotional skills may develop independently: young children with high reading literacy are more likely to read books and further develop such skills, while those with high levels of curiosity early in life are more likely to invite stimulating experiences and may further enhance curiosity. But these skills can also influence each other as individuals progressively develop skills. For instance, children with strong self-control are more likely to follow through the work needed to finish reading a book, maths homework or a science project, all of which contribute to further enhancing cognitive skills.

Policy and learning contexts on social and emotional skills

Policy makers, teachers, employers and parents in OECD countries and partner economies generally recognise the need to equip individuals with social and emotional skills. In general, parents are likely to be concerned whether their children have sufficient levels of compassion, perseverance, self-esteem and

creativity. Enterprises also look for social and emotional skills such as communication skills, leadership and creativity in their employees and often provide training programmes to enhance those skills.

This point is addressed in their national or sub-national policy statements, which highlight the importance of increasing children's autonomy, responsibility and the ability to co-operate with others. Such an emphasis is also reflected in national or sub-national curricula where social and emotional skills are addressed within and across subjects (see Box 1.1. for policy discussion related to social and emotional learning in Japan). Moreover, schools in most of these countries mobilise a range of extracurricular activities to enhance social and emotional skills. In many OECD countries and partner economies, general guidelines are available for schools to assess students' social and emotional skills. Schools tend to measure and report these skills in end-of-term school report cards (OECD, 2015).

Box 1.1. Policy discussions around social and emotional learning in Japan

Japanese Basic Act on Education of 1947 (revised in 2006) clearly sets out the objectives of education as the development of well-rounded character and citizenship with transversal skills. In Article 1, it defines the "Aims of Education" as follows:

> Education shall aim for the full development of personality and strive to nurture the citizens, sound in mind and body, who are imbued with the qualities necessary for those who form a peaceful and democratic state and society.

Furthermore, Article 2 specifies the "Objectives of Education" to achieve these aims (relevant parts are underlined by the authors):

> To realise the aforementioned aims, education shall be carried out in such a way as to achieve the following objectives, while respecting academic freedom:
>
> 1. To foster an attitude to acquire wide-ranging knowledge and culture, and to seek the truth, cultivate a rich sensibility and sense of morality, while developing a healthy body.
> 2. To develop the abilities of individuals while respecting their value; cultivate their creativity; foster a spirit of autonomy and independence; and foster an attitude to value labor while emphasising the connections with career and practical life.
> 3. To foster an attitude to value justice, responsibility, equality between men and women, mutual respect and cooperation, and actively contribute, in the public spirit, to the building and development of society.
> 4. To foster an attitude to respect life, care for nature, and contribute to the protection of the environment.
> 5. To foster an attitude to respect our traditions and culture, love the country and region that nurtured them, together with respect for other countries and a desire to contribute to world peace and the development of the international community.

Since the mid-1990s, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has been promoting education reform under the philosophy of "Zest for Living (*ikiru chikara*)" which is a notion that combines "a healthy body," "a well-rounded character" and "solid academic prowess" (MEXT, 2005). As a result, a new curricular activity called "Periods for integrated study" was introduced in the curriculum in elementary to upper secondary schools to enable students to self-reflect on their own lives through a variety of classroom learning methods such as cross-synthetic studies and inquiry studies.

Today MEXT is working towards the next revision of the curriculum guidelines in 2016-17. In this context, they established the "Review Committee on the Education Objectives, Contents and Evaluation Based on Qualities and Competences to be Fostered" to develop new frameworks of skills and discuss future educational objectives, curriculum guidelines and student evaluation. The Committee's discussions include questions on how the new skill framework could incorporate social and emotional skills needed in the future, such as autonomy, interpersonal skills, capacity to work with others, capacity to solve problems and create new values, and skills towards learning (e.g. motivation, concentration and endurance).

Nevertheless, not many of these educational systems provide detailed guidance on how to enhance social and emotional development (OECD, 2015). For example, a country's national school curriculum does not necessarily provide explicit and practical instructions on how social and emotional skills might be taught in schools. While this provides schools and teachers flexibility when designing their own lessons, this may not help teachers who are unsure how to teach these skills most effectively. This may be particularly challenging among teachers who feel overwhelmed by the need to prepare students to perform well on core academic curricular subjects such as mathematics and languages. Some parents are also "left in the dark" while struggling to enhance their child's will power, self-esteem and altruism before they enter adulthood.

Although legislation and curricula are not the only available instruments that shape learning environments to foster social and emotional skills, educational systems may consider enhancing existing guidelines that build on successful practices and evidence in the literature. Some initiatives available in selected communities, school districts and individual schools offer good examples of ways to systematically collect useful information on social and emotional skills to identify those students in need of better pedagogy and guidance. There are already a number of promising pedagogical approaches and learning contexts that can be explored, as described in this paper. Systematic exchange of such information among educational stakeholders and researchers may help provide opportunities for others to experiment with such practices and enrich the evidence base. There is no one-size-fits-all solution, as there are considerable socio-cultural variations within, as well as across, countries that affect the nature of optimal learning contexts for children's social and emotional development. However, now is a good time to conduct a broad review of diverse learning contexts in order to identify if there are common features of learning contexts and intervention programmes that are conducive to social and emotional development.

Scope of this paper

This paper provides an overview of evidence on learning contexts that are likely to be conducive to social and emotional development. It mainly focuses on periods between birth and adolescence. The main sources of evidence are those studies that are relatively more amenable to causal inferences. Therefore, to the extent possible, this paper relies on evidence based on intervention studies with an experimental design (see Annex 1 for a description of study designs). As there is a paucity of such evidence, quasi-experiments (e.g. using comparison group identified ex-post) as well as longitudinal studies that exploit differences in the timing of learning contexts and skill outcome measures are also used. This paper largely relies on evidence presented in literature reviews conducted by Gutman and Schoon (2013), Kautz et al. (2014), OECD (2015), Noelke (forthcoming) and Collaborative for Academic, Social, and Emotional Learning (2012), as well as on the assessment of promising programmes described on the website of the Promising Practices Network (2014).

For Japanese studies, cross-sectional evidence is also included in the review due to a paucity of evidence that is based on experimental, quasi-experimental and longitudinal studies. Hence, the readers are invited to interpret the Japanese evidence presented in this paper with caution. The Japanese studies included in the paper are primarily those that were published during the past 15 years and are accessible online, and most of them have been identified through CiNii, an online database for academic publications in Japan. It is not an exhaustive review of the literature.

CHAPTER 2. CONCEPTUALISING SOCIAL AND EMOTIONAL SKILLS AND LEARNING CONTEXTS

This chapter presents a framework for understanding social and emotional skills and the learning contexts that help enhance social and emotional skills. The framework provides the basis for synthesising existing evidence in the next section.

Social and emotional skills

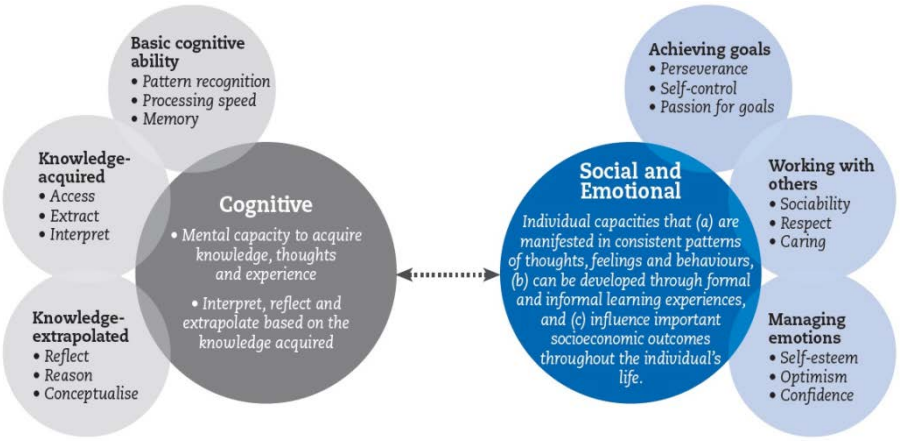
In this paper, skills are broadly defined as: "individual characteristics that drive at least one dimension of individual well-being and socio-economic progress (*productivity*), that can be measured meaningfully (*measurability*) and that are malleable through environmental changes and investments (*malleability*)". Individuals need a multiplicity of skills to achieve diverse life goals. Some existing measures of skills can provide useful information for improving teaching and parenting practices.

Our framework considers cognitive, social and emotional dimensions of skills (Figure 2.1). Note that these skills are not independent of each other but rather interact and cross-fertilise as they develop over time.

Skills are multifaceted

Social and emotional skills – also known as non-cognitive skills, soft skills or character skills – are the kinds of skills involved in achieving goals, working with others and managing emotions. As such, they manifest themselves in countless everyday life situations. Figure 2.1 presents a categorisation of skills based on some of their most important functions. Clearly, such skills play a role in all stages of life: for instance, while children are taught which behaviour is appropriate when playing with others, adults need to learn the rules of team play in professional settings. People pursue goals from an early age (e.g. when playing games, solving puzzles) and this becomes increasingly important in adulthood (e.g. when pursuing academic degrees and jobs, etc.). Learning appropriate ways of showing positive and negative emotions and managing stress and frustration is a lifelong pursuit, especially when dealing with life changes such as divorce, unemployment and long-term disabilities. These broad skill categories (i.e. pursuing goals, working with others and managing emotions) include a number of lower-level skill constructs, as described in Figure 2.1.

Figure 2.1. A framework for cognitive, social and emotional skills



Source: OECD (2015)

Our framework defines social and emotional skills as: "individual capacities that can be (a) manifested in consistent patterns of thoughts, feelings and behaviours, (b) developed through formal and informal learning experiences and (c) important drivers of socio-economic outcomes throughout the individual's life." The definition emphasises the latent nature of the construct that is manifested in consistent patterns of individual's responses across situations and contexts. These skills can be enhanced, through environmental changes and investments and consequently drive individuals' future outcomes.

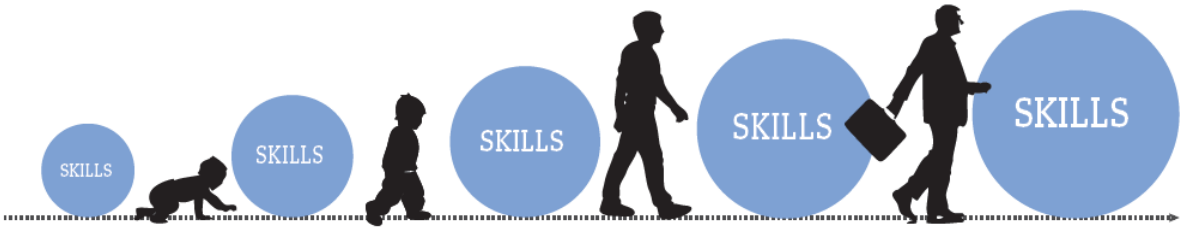
This framework is broadly in line with other existing frameworks that look at the individual characteristics that can be fostered through educational practices. Particularly, it draws upon the "Big Five" personality taxonomy that distinguishes five basic dimensions of personality traits: extraversion, agreeableness, conscientiousness, emotional stability (also known as neuroticism) and openness to experience. The framework is also broadly in line with other theoretical perspectives (e.g. temperament; social learning theory; positive psychology; grit) and existing frameworks (e.g. CASEL's Social and Emotional Learning Core Competencies).

While our framework distinguishes cognitive and socio-emotional skills, these two are not separable, as they interact and mutually influence each other. Skills such as creativity and critical thinking may be best understood by incorporating both cognitive and socio-emotional dimensions. Creativity, also referred to as divergent thinking, involves producing content that is not only novel, original and unexpected, but also appropriate, useful and adapted to the task at hand (Lubart, 1994). Creativity has been found to be related to measures of intelligence, as well as social and emotional skills. The Big Five framework also provides an understanding of some aspects of these complex skills. For instance, creative people tend to be more open to new experiences, imaginative, less conscientious, more impulsive and more extraverted (Feist, 1998). Critical thinking, on the other hand, involves the ability to use the rules of logic and cost-benefit analysis, think strategically and apply the rules to new situations to solve problems. This skill has a very strong cognitive component relying on the ability to reflect on information, interpret it in a new context and find solutions to novel problems based on existing knowledge (Halpern, 1998). However, critical thinking also incorporates aspects of openness to new experience, such as imagination and unconventionality (John and Srivastava, 1999). Many real-life situations require the emergence of more complex skills that incorporate intellectual, social and emotional components. Therefore, the current framework should be seen as a synthesis of different aspects of skill domains that interact in everyday situations.

Skills need to be understood in a dynamic framework

Skills progressively develop over time building on past learning, as Figure 2.2 illustrates. There is growing evidence that cognitive, social and emotional skills can be enhanced during an individual's lifetime. Skill development is not only affected by genes and the environment, but also by input from families, schools and the community. Parents assume a great responsibility in their children's skill formation as they shape many of the environmental factors that will influence children's development (through parents' choice of neighbourhood, educational programme and household characteristics). The impact culture, policies and institutions have on skill formation and across learning contexts should not be underestimated either. These diverse learning factors are crucial in understanding the process and are presented in detail in the following section.

Figure 2.2. Skills development over a lifetime



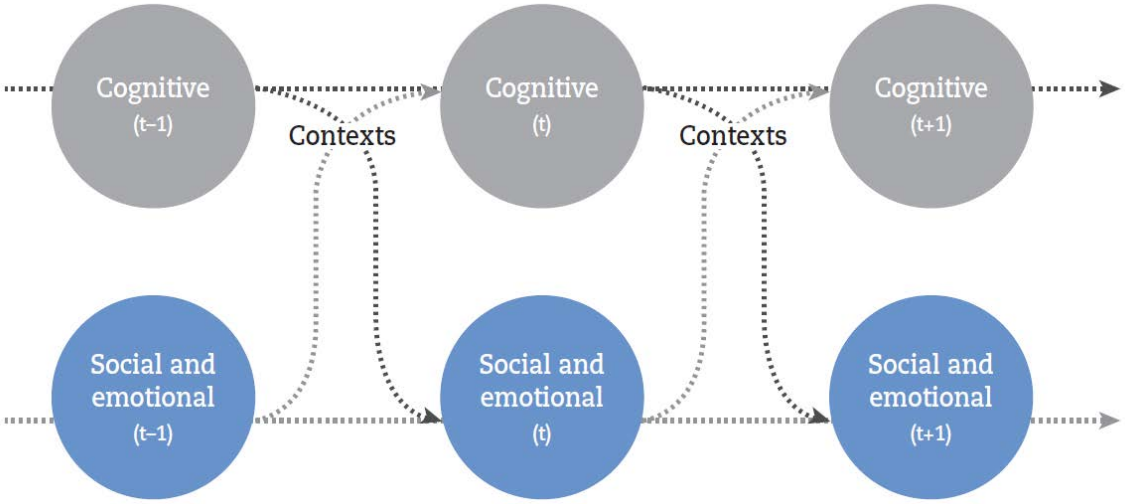
The rate of skill development largely depends on the individual's age and on their current level of skills. It is now recognised that there are sensitive periods for skill development. A child's early years matter tremendously in the development of skills, as they lay the foundations for future skill development. Investment in early childhood interventions brings the biggest returns in terms of securing higher levels of skills and positive adult outcomes (Kautz et al., 2014). During these years, family is of crucial importance and the patterns of interaction between parents and children have significant impacts on cognitive, social and emotional skills. However, later interventions can also be effective, especially in terms of social and emotional skills (OECD, 2015). During middle and late childhood and adolescence, schools, peer groups, and the community become increasingly important influences in shaping these skills. In addition, alternative programmes for those who drop out of school (i.e. in-work training) have also been found to be important for later skill development (Kautz et al., 2014).

Past skills are important determinants of current skills

"Skills beget skills" implies that, the higher the levels of skills that individuals have, the higher their gain in skills, as shown in Figure 2.3 (Carneiro and Heckman, 2003). This applies to the process of accumulating the same skill: for instance a child with relatively higher maths literacy than his or her peers at the point of entering school is more likely to end with even higher maths literacy at the end of the school year, compared to his or her peers. Moreover, there is also evidence of so-called cross-productivity whereby one type of skill can help foster other skills over time (Cunha and Heckman 2007; Cunha, Heckman and Schennach, 2010). This is particularly true for those individuals with higher levels of social and emotional skills, as these skills can aid cognitive skill development. For instance, a child who is very disciplined and persistent is more likely to increase his or her maths skills more than a child with equal levels of maths skills but with lower levels of discipline and persistence. Discipline and persistence may make it more likely that the child will focus on lessons and do homework regularly. Cognitive and social and emotional skills are thus tightly connected. More generally, those with higher skills are more likely to be able to elicit more from their learning contexts. A highly skilled child is more likely to select tools that

advance his or her knowledge, or seek out further opportunities for growth (e.g. through extracurricular activities).

Figure 2.3. Dynamic interactions between cognitive and social and emotional skills



Source: OECD (2015)

Importantly, the sensitive periods for social and emotional skills are not quite the same as those for cognitive skills. While early investment is beneficial to all skills, social and emotional skills are more malleable at the later stages of life than cognitive skills (Cunha and Heckman, 2007; Cunha, Heckman and Schennach, 2010). Moreover, adolescence appears to be a period of particularly turbulent changes in social and emotional skills. For instance, adolescence tends to be associated with declines in discipline (conscientiousness), friendliness (agreeableness) and emotional stability (Soto et al., 2011). These negative changes seem to affect some children more than others and more research is needed to understand how some of the negative impacts could be buffered.

Learning contexts that foster social and emotional skills

This section describes a variety of ways in which children's social and emotional skills can be enhanced through families, schools and communities. Some of the successful programmes (as described in the next chapter) are designed in a way that these diverse contexts are well aligned so that children can reinforce the social and emotional skills they acquire within each learning contexts. This demonstrates the complementary nature of skills in that skills learnt in one environment can be reinforced in another and over time.

Children's social and emotional development takes place in a variety of settings including family, school and the community. Within each type of context we can distinguish a number of specific elements, with examples presented in Table 2.1. Each context contributes to the development of cognitive, social and emotional skills, though their relative importance will change depending on a child's stage in life. For instance, families are clearly crucial during infancy and early childhood, but schools and communities become increasingly important as a child enters formal education and starts interacting with diverse social networks.

The impact of learning contexts on skills can be divided into direct inputs, environmental factors and policy levers. These represent different ways in which families, schools and communities shape skills. Direct inputs intentionally and explicitly affect skill development; for instance, parental involvement in child-rearing activities. Environmental factors, on the other hand, influence skill development indirectly by affecting the context in which skills can develop; for instance, the civic and cultural activities available to a child growing up in a particular community. Policy levers are elements of a learning context that can be directly or indirectly manipulated through policy inputs and can be used to foster skills; for instance, teacher training, which informs teachers' approaches to teaching cognitive, social and emotional skills.

Table 2.1 shows examples of the direct inputs, environmental factors and policy levers that can be found in different learning contexts. These learning contexts do not function in isolation from each other; rather they constantly interact and mutually influence each other. In fact, the patterns of interactions between contexts can themselves be related to skill development. For instance, parental involvement in children's schools, like attending parent-teacher meetings, may help children's skill development by improving both family and school learning contexts (El Nokali, Bachman and Votruba-Drzal, 2010). Indeed, many of the promising programmes for enhancing social and emotional skills (presented in the next section) have multiple treatments.

Table 2.1. Direct inputs, environmental factors and policy levers to enhance skills (examples)

	Family	School	Community
Direct inputs	Parental interaction with children (e.g. reading books, sharing meals and playing); parenting styles; parental modelling	Curricular and extra-curricular activities; teachers' pedagogic skills and knowledge; teaching styles; classroom climate; apprenticeships and job training	Activities offered in the community (e.g. volunteering, sport associations); mentoring; media; social networks; peer modelling
Environmental factors	Family's socio-economic resources (e.g. income, education); parental mental health; family stress and disturbing events (e.g. family violence, maltreatment); parental involvement in school	School resources (e.g. expenditure, facilities); school climate and safety	Public services (e.g. parks, childcare, community centres); neighbourhood safety; unemployment rate; income levels
Policy levers	Parental leave provisions; flexible working arrangements; childcare services; out-of-school-hours childcare services; family cash benefits	Teacher recruitment and training	Training of social workers; cultural and sport programmes

Learning in diverse social contexts points to the value of formal, informal and non-formal learning. Formal learning involves institutionalised, curriculum-based learning and teaching, for instance learning that occurs within the education system or workplace training (Werquin, 2010). Informal learning can take place within work, family or community contexts. It is unstructured and, from the learner's perspective, is unintentional (Cedefop, 2008). This type of learning happens, for instance, when children play. Non-formal learning is situated between formal and informal learning. It is structured and intentional, but not regulated, nor is it accredited or formally supported. An example might be teaching oneself how to use a particular piece of software.

Family

Families play an enormous role in shaping children's social and emotional development, particularly during early childhood. This can be due to the relatively longer time children spend in household contexts and the relatively higher brain plasticity during this period. Parent-child interactions (e.g. reading books, playing games and sharing meals) provide strong emotional ties between parents and children, which could help foster children's social skills as well as emotional stability. The nurturing effects of parents can be

reinforced when parental attachments become part of family rituals or routines. Early caregiving characterised as sensitive, responsive, involved, proactive and providing structure has been associated with positive socio-emotional adjustment while those characterised as neglectful, harsh, distant, punitive, intrusive and reactive has been associated with various types of maladjustment (Shaw, 2014). Family socio-economic resources can also play an important role to the extent that higher income allows parents to prepare a better learning environment for the children. Hence, mother's employment may have positive or negative effects depending on the quality of the alternative learning contexts that children experience during early childhood. Policy levers can have indirect effects on children's social and emotional development depending on how much impact they have on improving parent-child relationships and socio-economic resources.

School

Schools (including kindergartens) can also play an important role, given the evidence suggesting continued malleability of social and emotional skills during childhood and adolescence.

Schools have a variety of approaches to adopt in enhancing social and emotional skills. For instance, there are curricular activities specifically designed to enhance social and emotional skills. School can also adapt existing curricular activities to strengthen social and emotional skills while developing core academic skills (e.g. maths and languages). Moreover, schools can also work to improve school/classroom climate whereby students' social and emotional skills can be fostered.

Extra-curricular activities are another important means to enhance students' social and emotional skills. Club activities such as sport, music and arts are potentially powerful medium through which children can foster social and emotional development while learning other specific skills. Some schools offer students with opportunities to engage in community services (e.g. volunteering), a scheme typically called service-learning programmes. This provides students with an opportunity to engage in the labour market and reflect on this experience in classroom setting. This is considered a promising approach as it tends to trigger active engagement in real world, strengthen understanding of the community needs and provides a chance to reflect and deepen the understanding of the values of community engagement.

Upper secondary schools in a number of OECD countries have apprenticeships or job training programmes. These programmes, like service learning programmes, provide opportunities for students to engage in the world of work, whereby they experience tasks that have a concrete outputs that are useful for the community. Students can learn the value of collaborating with others and the importance of being perseverant and flexible, while gaining a sense of work satisfaction and self-esteem.

Community

Communities provide further opportunities for children to learn social and emotional skills through experiencing engagement in the real world. Communities generally offer diverse activities including outdoor programmes (e.g. boy scouts) and volunteering. There are also community-based mentoring programmes that match children with non-family mentors who would become "role models."

CHAPTER 3. WHICH LEARNING CONTEXTS MATTER?

This chapter provides a synthesis of existing evidence on the learning contexts that can be conducive to nurturing children's social and emotional skills, based on international sources as well as from Japan. As described in Chapter 2, social and emotional skills include capacities to achieve goals (e.g. perseverance, motivation, self-regulation and self-efficacy), work with others (e.g. social skills, cooperativeness, trust and empathy) and manage emotions (e.g. self-esteem, self-confidence, absence of internalising and externalising problem behaviours). A range of international intervention programmes and large-scale longitudinal studies provide useful information to identify the learning contexts that may play an important role. While the paucity of rigorous programme evaluation and longitudinal datasets available in Japan limits similar inferences made, evidence based on cross-sectional studies still provide useful comparisons to the evidence available internationally.

Family

Imagine parents who regularly devote a considerable amount of time interacting with children by reading books, playing games and sharing meals. Do children benefit from such an experience beyond the momentary comfort of parental warmth? Do they experience social and emotional development that may have long lasting effects on their lives? This section focuses on parent-child relationship as a factor that directly influences children's social and emotional learning at home. It also covers television viewing, parental involvement in schools, parental socio-economic backgrounds and mental health.

Strengthening parent-child relationships

The international evidence suggests that parental attachment is an important component of practices designed to enhance children's social and emotional skills. A number of United States-based early childhood intervention programmes that have successfully enhanced children's social and emotional skills mobilise activities designed to strengthen parent-child relationship. For instance, in the **Chicago Child Parent Center (CPC) programme**, a large-scale preschool programme for disadvantaged communities, staff conducted regular home visits to teach parents various forms of play to encourage them to read with their children. The **Syracuse Family Development Programme (FDRP)**, a large-scale programme targeted towards young, African-American, single-parent, low-income and low-education families, also assigns child development trainers who aim to increase family interaction, cohesiveness and nurturing through weekly family visits. The **High/Scope Perry Pre-school Programme** is a well-known early childhood intervention programme for disadvantaged families, in which trainers visit homes to help mothers improve parent-child relationships. These programmes are proven to have lasting effects on children's social and emotional development as demonstrated by increased academic motivation (CPC, High/Scope), reduced engagement in juvenile crime (CPC, FDRP) and improved adult economic stability and reduced adult criminal activity (High/Scope) (Kautz et al., 2014), although it is difficult to isolate the effects of improved parent-child relationships from the overall treatment effects.

Studies using large-scale longitudinal datasets provide evidence based on a much wider geographical scope and include population groups other than economically disadvantaged populations. A recent study using the **Early Childhood Longitudinal Study's Birth Cohort (ECLS-B)** data found that children who regularly sing, play, read books and eat dinner with their families tend to have higher ability to understand emotions as well as tendencies to express empathy, demonstrate self-regulation and form positive relationships with peers and adults (Muñiz et al., 2014).

The benefits of enhanced parent-child relationship can also be important after early childhood. The **Seattle Social Development Project (SSDP)**, a programme targeted towards public elementary schools in

high-crime areas of Seattle, suggests that school interventions focusing on interactions between children and their parents and teachers can enhance children's self-efficacy (Kautz et al, 2014). Moreover, the **Pathways to Desistance (PDP)**, a multi-site longitudinal study of serious adolescent offenders, suggests that parenting styles characterised by high warmth and firmness relate with adolescents' sense of responsibility, empathy, anxiety and aggressive offences (Steinberg, Blatt-Eisengart and Cauffman, 2006).

Findings from Japanese longitudinal studies are consistent with the international evidence. Analyses of data from the **Japan Children's Study** (Annex 3), a birth cohort study conducted in Mie, Osaka and Tottori prefectures, suggest that maternal acts of praising and attitudes towards praising are associated with young children's social skills (Shinohara et al., 2010; Shinohara et al., 2011). This longitudinal study also suggests that mothers reading to children and fathers' involvement in child rearing are associated with children's responsiveness (Tanaka et al., 2010). Takeuchi et al. (2011) suggest that parenting styles termed "affectionless control" characterised by low responsiveness and overprotection are related to lower levels of persistence, self-directedness and cooperativeness and higher levels of harm avoidance and self-transcendence.

Cross-sectional studies have found that parenting styles during early childhood in which mothers emphasise communication and contacts with their children are related to children's higher levels of pro-social behaviours as well as lower risk of conduct problems and hyperactivity/inattention (Hamano and Uchida, 2012; Uchida and Ishida, 2011). Kanie et al. (2006) report that parental engagement in children's study and museum visits, as perceived by children, is positively correlated with children's self-esteem. In contrast, maternal lack of care and protection (i.e. neglectful parenting) and paternal overprotection have been shown to predict children's aggressive behaviours and delinquency (Hiramura, 2010). Togasaki and Sakano (1997) report that mother's negative parenting attitudes characterised by active refusal is related to children's lower social skills, particularly behaviours to develop and maintain relationships.

Television viewing

Media devices can be effective tools for parents to nurture children's social and emotional skills if they are used to complement social and emotional learning. However, media devices may also be used to substitute activities that involve parent-child interactions or interpersonal communication with peers. If the latter is the case, children who engage in long hours of media exposure are less likely to experience social and emotional development than otherwise. There may also be negative effects from media contents such as increased aggressiveness due to violent media contents. This paper focuses on television which is still the most popular media device.

Some of the international evidence suggests that young children's lengthy television viewing is negatively associated with their social and emotional development. An analysis using the British **Millennium Cohort Study (MCS)**, a national birth cohort study with more than 10 000 participants, found that watching television for three hours or longer a day at age 5 predicts a slight increase in conduct problems at age 7 (Parkes et al., 2013). Another study based on the United States' **Children of the National Longitudinal Study of Youth (CNLSY)**, a spin-off cohort study of the 1979 National Longitudinal Study of Youth (NLSY79) that follows 1 300 children over time, found that hours of television viewing at ages 1 and 3 were associated with attention problems at age 7 (Christakis et al., 2004).

The available evidence in Japan also suggests negative effects of excessive television viewing during early childhood on social and emotional development. Sugawara (2005) reports that one-year-olds who were exposed to television and video for longer hours tended to have lower scores in the communicative development test. She also found differences between those with higher scores and those with lower scores in other factors such as time spent playing outside, frequency of book reading by mother, maternal parenting attitude, maternal confidence toward her child, family cohesion assessed by parents. Cheng et al.

(2010) report a positive association between young children's television viewing and behavioural problems, based on longitudinal data from the **Japan Children's Study** (Annex 3). They found that daily television exposure at 18 months old predicts the child's behavioural problems at age 30 months, particularly problems of hyperactivity-inattention and low pro-social behaviours. Similarly, Kano et al. (2007) found that children aged 36 months who watched television for 4 hours or more per day were more likely to experience slower social development (e.g. being able to share snacks or toys with friends or siblings, wanting to care for younger children, being able to wait their turn) than children with shorter television watching time.

As for school-age children, however, research results in Japan are mixed. For example, studies suggest both positive and negative relationships between children's television viewing time and their levels of aggression (Omi and Sakamoto, 2005; Shibuya et al., 2004).

One should interpret the above results with caution as it may well be children's social and emotional skills that are driving their excessive television viewing behaviours. For example, a study by Sugawara (2011) using the longitudinal data called **Better Broadcasting for Children Project** (Annex 3) found that television viewing hours were significantly longer for those six-year-olds who had exhibited high "harm avoidance" tendency at age zero, as characterised by excessive worrying, pessimism, shyness, and being fearful, doubtful and easily fatigued. This indicates a possibility that children's social and emotional skills affect their television viewing behaviours. To the extent that the evidence presented above do not control for this reverse causality, it is difficult to conclude the causal effects of television viewing.

Parental involvement in schools

Parents who are more engaged in school-based activities are more likely to be effective in parenting at home. This is not only due to the parenting techniques that parents may learn through these school-oriented programmes, but also the increased ability of parents to create a coherent and consistent learning environment for children between the school and home.

The international evidence suggests that parental involvement in school-based programmes designed to enhance social and emotional skills can be important. For example, the **4Rs programme** has "Family Connection" activities that students take home to complete with their caregivers and parent workshops held at schools. The programme has been found to be effective in improving social competence and interpersonal negotiation strategies (Jones, Brown and Aber, 2011). In the **Second Step programme**, teachers send home a "Home Link" activity that gives students an opportunity to practice new skills with their caregivers. This programme is found to be effective in improving assertiveness, self-control, social competence, co-operative behaviour and perspective taking, as well as reducing internalising/externalising behaviour (Holsen, Smith and Frey, 2008; Schick and Cierpka, 2005; Grossman et al., 1997).

Parental socio-economic backgrounds and mental health

Family socio-economic backgrounds such as parental income, occupation, and education may also indirectly shape children's social and emotional skills, as they can affect parents' ability to provide responsive and consistent care and healthy emotional environment. There are a number of studies that show family socio-economic status has a positive impact on children's cognitive skills (see Noelke, forthcoming for a review), and recently some studies suggest that socio-economic status can also affect children's social and emotional skills. For example, analyses based on the **National Longitudinal Study of Canadian Youth (NLSCY)** suggest that child benefit expansions had positive effects on reducing children's aggression and anxiety as well as improving motor and social development (Milligan and Stabile, 2009, 2011). A study using the **Early Childhood Longitudinal Study's Kindergarten Cohort (ECLS-K)** panel data found that children differ substantially in social and emotional skills (approaches to

learning, interpersonal skills, self-control, and externalising and internalising problem behaviours) by family income when they enter kindergarten, and these differences grow over time (Fletcher and Wolfe, 2012).

In Japan, there are also studies that report a positive correlation between family socio-economic status and children's social and emotional skills. For example, Shikishima, Yamashita and Akabayashi (2012) analysed data of 660 children in elementary and junior high school from the **Japan Child Panel Survey 2011** (Annex 3), and found that family socio-economic background partially explains children's behavioural problems and pro-social behaviours. They found that children whose mothers have university degrees were more emotionally stable, had higher self-esteem and reported higher adjustment at school, compared with their peers whose mothers do not have university degrees. The authors also observed that children from higher income households were more likely to report better emotional stability, lower risk of behavioural problems and higher school adjustment.

Maternal mental health also appears to predict children's social and emotional skills. Studies in the United States suggest that maternal mental health is a key factor that influences child cognitive, social and emotional development. NICHD (1999) reports that children whose mothers reported feeling depressed were rated as less cooperative and more problematic at 36 months. Similarly, Frank and Meara (2009) analysed longitudinal data of the **NLSY79** and found a strong relationship between maternal depression and behavioural problems among seven to 14-year-olds. Moreover, clinical research suggests that children of depressed mothers present lower psychiatric symptoms if their mothers' depressive symptoms improve (Wickramaratne et al., 2011).

A study using the **Millennium Cohort Studies (MCS)** report suggests that maternal depression was strongly associated with mothers' reports of children's behavioural problems (both internalising and externalising problems) (Kiernan and Huerta, 2008). Furthermore, this study found maternal depression was noticeably associated with the use of harsh disciplinary practices (more frequent striking and shouting), which in turn were very strongly related to conduct problems amongst the children. A substantial part of the effect of economic deprivation on child behaviour problems was mediated through the mother's depression, which is consistent with the perspective of family stress theory.

Findings from Japanese longitudinal studies are consistent with ones from international research and suggest a strong relationship between maternal mental health and children's social and emotional skills. Sugawara et al. (1999) report a significant relationship between maternal depression during the early post-partum period and infants' persistence and frustration tolerance (temperament scale) at the age of six months using the longitudinal dataset of the **Kawasaki project** (Annex 3). On the other hand, maternal depression when the child was 12 months old did not have such a relationship with the two temperament dimensions. These results indicate that maternal depression may have different relationships with infant temperament over time. An intervention study with a randomised control trial in Yamanashi prefecture by Cheng et al. (2007) suggests that early maternal depression significantly increased the risk of child behavioural problems. Shikishima, Yamashita and Akabayashi (2012), using the **Japan Child Panel Survey** (Annex 3) data of children aged 6-15, also report that children's problem behaviours hadthe strongest relationship with maternal mental health amongst several family background variables. However, the authors called for a caution in interpreting the relationships between maternal mental health and child behavioural outcomes. They may simply be a result of (1) children's problem behaviours affecting maternal mental health, (2) genes influencing both maternal mental health and child problem behaviours, and (3) maternal mental health affecting mother's responses to the questionnaires.

Box 3.1. Maternal employment and children's social and emotional skills

Many OECD countries are exploring ways to expand female employment. Of particular interest is identifying how labour market and social policies can help bring women back to the labour market after childbirth. While there are numerous benefits of female labour market participation for the individuals and the society, the evidence on the impact of maternal labour market participation on children's social and emotional development is mixed. Noelke's (forthcoming) review of studies in North America and Europe indicates that maternal employment in general has neither a negative nor a positive effect on child development. However, among families with disadvantaged socio-economic backgrounds, the impact of maternal employment on children's cognitive, social and emotional development tends to be positive. Among those socio-economically advantaged, maternal employment effects tend to be negative.

International evidence points to the heterogeneity of the effects of maternal employment across household socio-economic situations. Lucas-Thompson et al. (2010) present a meta-analysis of 69 studies on the relationship between early maternal employment during a child's first three years of life and the child's academic achievement and behavioural problems. They found that while effect sizes were overall small or non-significant, early maternal employment was beneficial for children from single-parent families and families receiving welfare. In contrast, negative effects were observed among middle-class and two-parent families and for employment during the child's first year of life. Gregg et al. (2005) and Ruhm (2004) also found that full-time maternal employment in the first year after birth may have negative effects on development of children from socio-economically advantaged families – typically two-parent families with higher educated mothers. Similar conclusions are derived from Huerta et al. (2011) who analysed longitudinal data of five OECD countries. They suggest that a return to paid work by mothers within six months after childbirth was negatively associated with child outcomes, although the associations were small and not observed in all countries. Moreover, the negative associations were largely observed among children in intact families or in families where parents have high levels of education. This negative relationship was no longer observed when mothers returned to work after the child's first year of life. Children with advantaged backgrounds may have more to lose than their less advantaged peers when their mothers are working.

Some studies in Japan suggest that maternal employment may have positive effects on child's social and emotional skill development. Using longitudinal data from the "Kawasaki Project" (Annex 3), Sugawara et al. (2006) suggest that children whose mothers returned to work before the child reached three-years-old had slightly "fewer" externalising problems, compared with children whose mothers stayed at home. Kan (2012) analysed the effect of maternal employment during junior high school years on children's cognitive, social and emotional skills during junior high school years, using retrospective data, and found that maternal full-time employment prevented their sons from smoking cigarettes at school. Sugawara et al. (2006) provide the following potential explanations for the positive effects of maternal employment on children's social and emotional skills: (1) maternal employment may positively influence maternal mental health, which, in turn, helps reduce children's behavioural problems; and (2) children of working mothers may have more opportunities to interact with other children and adults by attending formal child care centres, which helps their social skill development.

School

Do children develop their social and emotional skills by experiencing systematic social and emotional learning at school? What are benefits of different school-based extra-curricular activities to children's social and emotional skills? Does an open, supportive and safe school climate help children's social and emotional learning? This section covers some approaches related to classroom instruction, extra-curricular activities, and school/classroom climate, among school-based activities for social and emotional learning.

Classroom instruction

There are a number of school-based (including early childhood) programmes specifically designed to increase social and emotional skills. These programmes typically provide specific lessons focusing explicitly on instruction of social and emotional skills and/or strategies to embed social and emotional learning in core curricular activities such as English and mathematics.

Lessons designed to enhance social and emotional skills

The international evidence, mostly United States-based, provides examples of successful curricular activities specifically designed to enhance social and emotional skills (Annex 2). While each programme has a different set of distinctive goals and targeted skills, they tend to be particularly effective in raising children's capacities to work with others and to manage emotions. These programmes typically employ a variety of hands-on activities so that students internalise learning and apply it to everyday life.

For instance, the above-mentioned **Second Step programme** contains sets of age-appropriate lessons for pre-kindergarten through eighth grade to be taught once a week. There are three to five units for each grade, such as skills for learning, empathy, emotion management, problem solving, bullying prevention and substance abuse prevention, with each unit consisting of several weekly lessons. In a sample lesson on "disagreeing respectfully," students would watch video and engage in partner activities, group discussion and skill practice through role-play. The **"I Can Problem Solve" (ICPS)** programme, another American school-based prevention programme for pre-kindergarten to elementary school children, offers a series of 15- to 45-minute structured lessons that can be conducted daily or every other day (59 lessons for preschool; 83 lessons for kindergarten through Grade 2; and 77 lessons for Grade 3 through Grade 6). Earlier lessons focus on "pre-problem-solving skills" that involves learning vocabulary to understand one's own and other people's feelings. Later lessons aim to develop interpersonal problem-solving skills through games, stories, puppets, illustrations, and role-plays. Teachers do not tell students solutions, but instead help them to think of their own ideas. Both randomised control trials as well as a quasi-experimental study suggest that the programme has improved children's self-regulation and patience.

In Japan, several social and emotional learning programmes are available for school practitioners, and most of them have lesson plans specifically designed to enhance social and emotional skills. Teachers often use these programmes during curricular activities called the "period for integrated studies" (Box 1.1), while these programmes tend to be relatively short. Several evaluation studies in Japan report positive programme effects on social and emotional skills, although these evaluations do not have control groups. For example, Ando (2008) reports that the programme named the "**Successful Self**" programme, a school-based prevention programme, was effective in reducing elementary school students' impulsivity/aggression and school maladjustment including physical and verbal bullying and emotional problems. The programme consists of four lessons involving individual reflection and group discussion on positive self-image, interpersonal problem solving strategies and stress management. Ando (2010) also reports that a similar programme targeted towards junior high school students ("**Successful Self 2**") improved students' diligence, friendliness, mood (e.g. depression and anxiety) and social skills. Fujieda and Aikawa (2001) developed a classroom-wide social skills training programme for elementary school students, and report that students' interpersonal skills improved after the training. The training contained 10 lessons, each of which involved teacher's instruction and demonstration of target skills, students' role plays and self-reflection, and teacher's feedback. Watanabe and Harada (2007) also developed a social skill training programme for high school students involving teachers' instruction and demonstration, students' role-plays, and teacher's feedback, and report that students' self-esteem and ability to sympathise with and support others improved after the training. Harada (2014) evaluated a similar social skill training programme for high school students with larger groups of students, and found that students' assertiveness and emotional control improved after the training.

Embedding social and emotional learning in core curricular activities

The international evidence, mostly United States-based, also provides examples of successful programmes that embed social and emotional learning in core curricular activities. One of them is the **RULER Approach**, a school-wide programme designed to promote emotional literacy in kindergarten through eighth grade. This programme provides systematic professional development for the adults

involved in the education of children (school leaders, teachers, support staff and families). It enables teachers to integrate emotional learning into a wide range of subject areas such as English (language arts). In the "Feeling Words Curriculum," students learn emotion-related vocabulary words and connect them to academic materials or current events. This approach, based on a randomised control trial, has been found to be effective in improving adaptability skills (social skills, leadership and study skills) (Brackett et al., 2012). The **Responsive Classroom** approach, a classroom-based programme for kindergarten through sixth grade, incorporates essential teaching practices and practical strategies including morning meetings, rule creation, interactive modelling, and positive teacher language. This programme, based on a quasi-experimental study, has been found to be effective in increasing assertiveness, co-operation and pro-sociality with peers and reducing anxiety, fear and aggressiveness with peers (Brock et al., 2008; Rimm-Kaufman and Chiu, 2007).

In Japan, there are studies suggesting that programmes promoting collaborative learning during English and Japanese lessons may increase students' pro-social skills and interpersonal skills (Ikejima and Fukui, 2012; Ikejima et al., 2004).

Peer support approaches

International evidence from effective intervention programmes suggests that peer support approaches can be effective in increasing social and emotional skills. For example, the **Caring School Community** programme provides Cross-Age Buddies activities in which pairs of older and younger students promote bonding through academic and recreational activities. Several randomised control trials and quasi-experimental studies show that programme participation improved children's social behaviours, and reduced conduct problems and emotional distress (e.g. Solomon et al., 2000).

Another potential peer support approach is peer mediation, in which students learn how to resolve conflicts by experiencing being mediators under the supervision of adult trainers. Based on two large-scale randomised-control trials, a United States-based programme with strong peer-mediation component called **Resolving Conflict Creatively Program (RCCP)**, shows positive effects on improving negotiation strategies and reducing conduct problems (Aber, Brown and Jones, 2003; Aber et al., 1998).

In Japan, Taki (2004, 2009) has developed the "**Japanese Peer Support Program**" that aims at developing students' self-efficacy through multi-grade activities, where older students take care of younger students. The programme is expected to provide young students with role models while increasing older students' sense of self-worth. Such multi-grade interaction activities have been found to be effective in enhancing students' sociality (National Institute for Educational Policy, 2008). Peer mediation has been recently introduced to education practitioners as a potentially effective tool to solve issues of school bullying and develop students' pro-sociality, but evaluation studies are still limited and their results are mixed. Aoki et al. (2013) report that a peer mediation training programme increased elementary school students' self-efficacy, particularly for those whose initial self-efficacy levels were lower. However, Ikejima et al. (2005) report that similar peer mediation training had no significant impact on elementary school students' interpersonal skills.

Mobilising extra-curricular activities

Extra-curricular activities are expected to provide effective learning opportunities for enhancing children's social and emotional skills. In Japan, the curriculum standards specify minimum hours that schools should secure for special activities such as homeroom activities, student government, club activities and school events. Moreover, international evidence suggests that service learning programmes and apprenticeship programmes that offer experience outside school are also effective in strengthening social and emotional skills.

Clubs and other after-school programmes

International research generally suggests that extra-curricular activities help enhance social and emotional skills. A meta-analysis of after-school programmes that seek to enhance the personal and social skills of children and adolescents indicates that, compared to the control group, participants demonstrate significant increases in their self-perceptions (e.g. self-esteem, self-concept and self-efficacy) and bonding to school, positive social behaviours and academic achievement, and significant reductions in problem behaviours (Durlak, Weissberg & Pachan, 2010). The analysis indicates that programmes that are "sequenced, active, focused, and explicit (SAFE)" are particularly effective. Another meta-analysis of extracurricular activities both in and out of school suggests that participation in performing arts and pro-social activities had a strong relationship with identity and self-esteem (Lewis, 2004).

A United States-based study by Covay and Carbonaro (2010) suggests that elementary school children who participate in music lessons, dance lessons, performing arts activities, art lessons, sports and clubs outside of school hours demonstrate greater attentiveness, organisation, flexibility, task persistence, learning independence and eagerness to learn, as compared to their peers who do not participate in such activities. A study based on the German Socio-Economic Panel, a large-scale longitudinal study in Germany, suggests that adolescents who receive music training tend to be more conscientious, open and ambitious (Hille and Schupp, 2015). 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).

In Japan, cross-sectional research suggests that participation in club activities is related to higher social and emotional skill levels. For example, Yamamoto, Araki and Kamino (2010) found that high school students participating in club activities had higher level of social and emotional skills related to achieving goals, expressing opinions and working with others. Aoki (2005) also found a positive relationship between high school students' athletic club participation and their levels of social skills.

Service learning programmes

In the United States, service-learning is an activity that combines meaningful service in the community with formal educational curriculum and structured time for participants to reflect on their service experience. Melchior et al. (1999) evaluated service learning programmes called **Learn and Serve** programmes at 17 middle and high schools in the United States, and found that students who participated in service learning improved acceptance of cultural diversity, service leadership, civic attitudes and volunteer behaviour and reduced engagement in risky behaviour (i.e. arrested during the past six months, ever pregnant/made pregnant). A meta-analysis by Celio, Durlak and Dymnicki (2011) of 62 international studies indicates that, compared to controls, students participating in service learning programmes demonstrate significant gains in five outcome areas: attitudes toward self, attitudes toward school and learning, civic engagement, social skills and academic performance. Another meta-analysis by Conway, Amel and Gerwein (2009) suggests that service learning had small but positive effects on personal, social and civic outcomes, such as self-evaluations, skill in interacting with others and personally responsible citizenship.

Apprenticeships and job training

Kautz et al. (2014) point out that integrating career development into a standard high school can have long-term labour market benefits. For example, **Career Academies** in the Unites States that expose students to career-oriented activities have positive and sustained impacts on male participants' earnings and employment, possibly through improving non-cognitive skills. Apprenticeship programmes in Europe

that carry out work-based and classroom learning are also found to have effects on wages and wage growth. An analysis of the **Transitions from Education to Employment (TREE)** – a Swiss longitudinal study – suggests that young people who participated in work-based education were more agreeable and emotionally stable compared to their peers who participated in vocational schooling (Bolli and Hof, 2014). The authors have not identified any related evidence in Japan.

Improving school and classroom climate

The international evidence provides many examples of successful programmes that promote positive school and/or classroom climate, among other approaches, to facilitate social and emotional learning. For instance, the **Open Circle Programme (OCP)**, a programme with 34 structured lessons that cover relationship building and communication skills, understanding and managing emotions, and problem solving, generates school and classroom climates that provide safe settings for children to discuss important issues. The programme introduces a highly interactive climate, incorporating large and small group discussions, role-playing and community-building activities. The above mentioned **RULER Approach** is designed to improve the classroom's atmosphere by enhancing positive emotional support (e.g. creating warmth and respect in classroom interactions), reducing negative climates (e.g. reducing hostility in classroom interactions), improving teacher sensitivity (e.g. the extent to which teachers respond to students' emotional and academic needs) and raising teachers' regard for student perspective (e.g. the extent to which classroom activities incorporate students' points of view).

In Japan, some studies have found a relationship between the classroom's climate and students' social and emotional skills, although students in the classroom measure the classroom's climate themselves. Udagawa and Shimoda (2013) found a positive correlation between elementary school students' assertiveness and their satisfaction with their classroom environment. Takahashi, Kawashima and Yoshikawa (2010) found that elementary school students who report higher levels of classroom satisfaction tend to have higher levels of social skills and may influence the social skill levels of other students in their classroom. Komatsu and Hida (2008) report that elementary school students who perceive positive classroom climate tend to have higher self-rating of social skills.

Community

Communities provide children with informal and non-formal learning opportunities. In particular, some programmes provided by communities can be factors that directly influence children's social and emotional skills. This section covers mentoring programmes, volunteering activities and outdoor adventure programmes among such programmes.

Mentoring programmes

Mentoring can be an effective way to enhance youth's social and emotional skills. A meta-analysis of mentoring programmes among children and adolescents by DuBois et al. (2011) concludes that mentoring programmes can improve behavioural, social and emotional, and academic outcomes of youth. The authors observe that mentoring can serve both promotion and prevention aims.

In the United States, a number of community-based mentoring programmes for at-risk youth are in place. At the **Big Brothers Big Sisters of America (BBBSA)**, a well-known mentoring programme for vulnerable children aged 10-16, adult volunteers regularly meet with children and share activities over one year. Evaluation of the BBBSA suggests that the programme reduces a variety of antisocial behaviours, such as hitting, stealing, damaging property and skipping class or day of school (Tierney, Grossman and Resch, 2000).

Following the success of community-based mentoring programmes, many school-based mentoring programmes have been introduced in the United States. In a typical school-based mentoring programme, volunteer mentors and students from the participating school are matched on a one-to-one basis, and spend their time together participating in a range of activities at school throughout the academic year (Wheeler, Keller and DuBois, 2010). Wheeler, Keller and DuBois (2010) reviewed three randomised control trials of school-based mentoring programmes, and concluded that school-based mentoring programmes have small but significant effects on school-related misconduct, absenteeism and truancy. Furthermore, the analysis of effects of the school-based BBBSA programme by Herrera et al. (2007) suggests that effects were more favourable when adults rather than high school students were mentors, when mentors reported receiving adequate levels of support, and when schools provide adequate access to school resources and space.

In Japan, while mentoring programmes have not been widely recognised yet, limited research in this field suggests positive effects. For example, Hiroshima city has been running a mentoring programme for elementary and junior high school students since 2004, and the questionnaires with its participants, mentors and participants' parents suggested improvement in the participants' emotional maturity, study habits, self-control behaviour and relationship with others (Watanabe et al., 2012). Mentors are volunteering adults trained by the city, and any student can participate in the programme free of charge. The programme typically lasts one year, during which mentors and mentees meet for two hours each week at their houses or in other places such as community centres. While mentoring sessions take place outside school, the programme is run in partnership with schools. For example, schools recommend the programme to parents, and first meetings between mentors and students are often arranged at school with presence of teachers (Watanabe, 2008). Another intervention programme in Japan that incorporates mentoring is the "Mental Friend" programme, in which young adult volunteers support children who do not attend school. The programme has been implemented by local governments with support from the Ministry of Health, Labour and Welfare. Although empirical evaluation has not been conducted, some qualitative studies suggest positive effects of the programme. For example, a survey on administrative staff in charge of the Mental Friend programmes suggests that children who participated in the programme became more extraverted, motivated and active in relating with others, with decreased behavioural problems (Kurita, 2014). Moreover, the organisation Big Brothers and Sisters Movement of Japan runs a mentoring programme for juveniles under probation, while no evaluation study has been identified.

Experiencing volunteering activities

International research suggests positive impact of community volunteering activities on youth's social and emotional skills, while the effect appears smaller than service learning (Gutman and Schoon, 2013). Some studies suggest that those who experienced volunteering activities during childhood are more likely to demonstrate higher pro-sociality in adulthood. The **Canada Survey of Giving, Volunteering and Participating (CSGVP)** suggest that those who reported being active in religious organisations, belonging to a youth group, or volunteering as youth were more likely than others to report making charitable donations and volunteering as adults (Hall et al., 2009). Similarly, a study on American adults suggests that those who began volunteering as youth are twice as likely to volunteer as those who did not volunteer when they were younger (Toppe, Kirsch and Michel, 2001).

In Japan, a few studies on adults suggest that volunteering experience may increase social skills (Midzuno and Kato, 2007; Baba, Shima and Oya, 2006).

Outdoor adventure programmes

International research generally finds that adventure programmes are beneficial for developing social and emotional skills. Meta-analyses suggest effects of adventure programmes on locus of control[1] (Hans et al., 2000), reduction in delinquency (Wilson and Lipsey, 2000), self-efficacy, behavioural observations, personality measures and self-esteem or self-concept (Gillis and Speelman, 2008). Wilson and Lipsey (2000) report that programmes involving relatively intense activities or with therapeutic enhancements were particularly effective in reducing delinquent behaviour.

In Japan, several studies also suggest potential positive impacts of outdoor adventure programmes on social and emotional skills. For example, Kataoka et al. (2011) suggest that participation in the Girl Scouts may increase high school and junior high school girls' self-esteem. The National Institution for Youth and Education (NIYE) (2010) reports a potential link between community and outdoor activities during childhood and social and emotional skills in adolescence and adulthood. The Institution analysed responses from 11 000 high school students and 5 000 adults on their childhood experiences and found that those who reported experience with nature, playing with peers and participation in community activities in childhood tended to be more open to new experiences, have higher normative consciousness and have higher interpersonal skills.

Moreover, potential effects of short-term outdoor activities on children's social and emotional skills have also been suggested. For example, Yasunami et al. (2006) report that elementary school students who participated in the six-day nature school programme generally increased their skills such as ability to make own judgment, leadership and interpersonal skills. They also report that some optional activities such as outdoor cooking appear particularly effective, while some other activities such as recreational activities appear less effective. Nakagawa et al. (2005) report that early adolescents who participated in a 15-day camping programme increased their ability to make own judgment and their interest in nature, while participants in a three-day camping programme increased extraversion and cooperation. Ihara et al. (2004) report that early adolescents who participated in an adventure programme increased their general self-efficacy.

[1] Locus of control is defined by Rotter (1990) as "the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics".

CHAPTER 4. KEY MESSAGES

This chapter concludes the paper by outlining the summary of key findings with implications for families, schools and the research community in Japan.

Summary of the empirical evidence

This paper has identified several characteristics of learning contexts that may be conductive to enhancing children's capacities to achieve goals (e.g. perseverance, motivation, self-regulation and self-efficacy), work with others (e.g. social skills, cooperativeness, trust and empathy) and manage emotions (e.g. self-esteem, self-confidence, low risk of internalising and externalising problem behaviours). Tables 4.1A and 4.1B present a summary of the empirical evidence discussed in this paper.

Families can foster children's social and emotional development through warmand regular parent-child interactions.

A number of studies point to the benefits of intensive parent-child attachments on children's social and emotional development. Some of the successful programmes involve regular family activities such as reading books, sharing meals, playing together, and accompanying museum visits. These practices can provide children with a sense of a warm and secure environment as well as with opportunities to closely interact and communicate with adults. Some studies also suggest that parent's socio-economic situations and emotional conditions may affect their capacity to provide a socio-emotionally nurturing environment. Successful early childhood programmes tend to offer parental training sessions to enhance parenting skills. Many successful school-based programmes also involve parents and provide them with opportunities to learn to create a coherent learning context between school and home. Findings from research in Japan are consistent with those from the international evidence.

Schools can employ a range of curricular and extra-curricular activities to stimulate children and adolescent's social and emotional development.

Quality school-based social and emotional learning programmes can help children acquire the capacity to achieve goals, work with others and manage emotions. These programmes tend to mobilise either (a) a set of lessons specifically designed to enhance social and emotional skills including those that employ scenarios and role-playing, or (b) teaching strategies designed to enhance children's social and emotional skills through existing core academic curricular subjects, such as introducing collaborative problem solving. The latter approach may be particularly relevant for Japanese schools where securing time and resources for developing and implementing social and emotional learning curriculum can be difficult. Successful social and emotional learning programmes tend to be highly interactive, proactive, reflective, practical, intentional and experiential.

Schools may also usefully mobilise extra-curricular activities as well as practical experience in engaging in society (e.g. volunteering) and the labour market (e.g. apprenticeships). Moreover, they may help enhance students' social and emotional skills through improving school and classroom climate and effectively employing peer-support approaches.

Community may complement efforts made by families and schools by providing opportunities for children to learn social and emotional skills through practical experiences.

One of the important goals of education is to develop children's capacity, attitudes and values in order to help them become responsible and active citizens. Perhaps the best place to learn such skills is the

community itself where various real-life settings provide a motivating learning ground for children to acquire social and emotional skills. Some volunteering and outdoor programmes, when they are well designed, have been shown to effectively enhance children's social and emotional skills. Successful practices tend to (a) emphasise intensive interactions between mentors and children to trigger sense of mutuality, trust, care and empathy, (b) employ experiential learning to encourage children to better cope with real-life problems and (c) stimulate children's sense of responsibility. Findings from Japan are also consistent with those from the international evidence.

Many successful programmes targeting children's social and emotional skills emphasise the importance of coherence across learning contexts.

It is not surprising to find that a number of successful programmes designed to elevate social and emotional skills involve enhancement of multiple learning contexts including family, school and community (e.g. parents receiving instructions to improve home-based activities, community resources mobilised as part of school programmes). These programmes can provide not only opportunities for children to experience enhanced learning, but also for adults (e.g. parents, teachers and mentors) to receive appropriate training. Such a holistic approach to social and emotional development may help ensure that (a) programme objectives are shared across all stakeholders, (b) social and emotional learning approaches are coherent across contexts and (c) the knowledge and skills of all care providers are augmented.

Social and emotional learning may not only be useful for disadvantaged children but also among other population groups.

A number of successful intervention programmes have been designed to enhance social and emotional skills among the disadvantaged population including low-income, low-educated and single-parent families. However, there is also evidence showing that show that social and emotional learning can be beneficial for other population groups.

Social and emotional learning may not only be useful for young children but also among adolescents.

Some social and emotional skills are malleable from early childhood through early adulthood. A number of intervention programmes have successfully enhanced social and emotional skills and behavioural outcomes of school-aged children and adolescents. Successful programmes tend to offer age-appropriate tools and contents, as individual's needs vary across different age groups.

Table 4.1A. Summary of results from international studies

	Domains	Achieving goals	Working with others	Managing emotions
	Examples of social and emotional skills	Perseverance, motivation, self-regulation, attention, self-efficacy, locus of control	Social skills, pro-sociality, cooperativeness, tolerance, empathy	Self-esteem, self-confidence, internalising and externalising behavioural problems
Family	**Direct role of parenting**			
	a. Strengthening parent-child relationship through family rituals and routines	Programmes with evaluations CPC*; FDRP*; High/Scope*; SSDP Longitudinal studies NLSCY(*) [CAN]; ECLS-B*; PDP**	Programmes with evaluations CPC*; FDRP(*) Longitudinal studies ECLS-B*; EHS*; PDP**	Programmes with evaluations JSS* [JAM]; ABC(*); CPC*; FDRP(*); NFP*; High/Scope* Longitudinal studies ECLS-B*; PDP**; EHS*
	Indirect family-related factors			
	a. Television viewing time and contents	-	-	Longitudinal studies MCS* [GBR]; CNLSY; Huesmann et al. (2003)
	b. Parental involvement in school	Programmes with evaluations Second Step [DEU]; Al's Pals(*); CPC*; High/Scope*; IY; SSDP	Programmes with evaluations Second Step [DEU, USA]; 4Rs; Al's Pals*; CSC; CPC*; IY; Peace Works*; PEF*; RCCP; RULER; SDM/PS; TGV	Programmes with evaluations Second Step [DEU, NOR, USA]; 4Rs; Al's Pals*; CSC; CPC*; High/Scope*; IY; MMH; Peace Works*; PATHS*; PAs; RCCP; SDM/PS; Tools of Mind*
	c. Household socio-economic background	-	Intervention studies NLSCY(*) [CAN] Longitudinal studies ECLS-K	Intervention studies NLSCY(*) [CAN] Longitudinal studies ECLS-K; MCS* [GBR]
	d. Maternal mental health	-	-	Longitudinal studies MCS* [GBR]; NLSY; NICHD (1999); Intervention programmes STAR*D-Child study
School	**Direct role of classroom instruction**			
	a. Specific lessons targeting social and emotional skills	Programmes with evaluations Second Step [DEU]; Competent Kids; CPC*; ICPS(*); IY	Programmes with evaluations Second Step [DEU, USA]; 4Rs; CSC; Competent Kids; IY; ICPS; MMH; OCP; PATHS*; Peace Works; RCCP; SDM/PS; TGV Meta-analysis Payton et al. (2008) [INT]; Durlak et al. (2011) [INT]	Programmes with evaluations Second Step [DEU, NOR, USA]; 4Rs; CSC; ICPS; IY; MindUP; OCP; PEF*; PATHS*; Peace Works*; PA; RCCP; SDM/PS; Tools of Mind* Meta-analysis Payton et al. (2008) [INT]; Durlak et al. (2011) [INT]
	b. Embedding social and emotional learning in core academic subjects	Programmes with evaluations Second Step [DEU]; Mindset; Al's Pals(*); High/Scope*; ICPS; IY; RC; Tools of Mind*; RC	Programmes with evaluations Second Step [DEU, USA]; 4Rs; Al's Pals(*); CSC; High/Scope*; ICPS; IY; MMH; OCP; PATHS*; Peace Works*; RC; RCCP; RULER; SDM/PS; TGV	Programmes with evaluations Second Step [DEU, NOR, USA]; 4Rs; Al's Pals(*); CSC; High/Scope*; ICPS; IY; MindUP; OCP; PA; Peace Works*; PATHS*; RC; RCCP; SDM/PS; Tools of Mind*
	c. Peer support approaches	-	Programmes with evaluations 4Rs (peer mediation); CSC; RCCP (peer	Programmes with evaluations 4Rs (peer mediation); CSC

Domains		Achieving goals	Working with others	Managing emotions
			mediation)	
	Direct role of extra-curricular activities			
	a. Clubs and other after-school programmes	Longitudinal studies ECLS-K	Meta-analysis Durlak, Weissberg & Pachan (2010)	Meta-analysis Lewis (2004) [INT]; Durlak, Weissberg & Pachan (2010)
	b. Service learning programmes	Programmes with evaluations Learn and Serve Meta-analysis Celio, Durlak & Dymnicki (2011) [INT]; Conway, Amel & Gerwein (2009)	Programmes with evaluations Learn and Serve Meta-analysis Celio, Durlak & Dymnicki (2011) [INT]	Meta-analysis Celio, Durlak & Dymnicki (2011) [INT]
	c. Apprenticeships and job training		Longitudinal studies TREE** [CHE]	Longitudinal studies TREE** [CHE]
	Indirect role of school/classroom climate			
	a. School/classroom climate	Programmes with evaluations IY; OCP; RC; SSDP	Programmes with evaluations 4Rs; CSC; IY; OCP; Peace Works*; PATHS*; RC; RCCP; RULER	Programmes with evaluations 4Rs; CSC; IY; OCP; MindUP; Peace Works*; PA; PATHS*; RC; RCCP; RULER; Tools of Mind*
Community	**Direct role of mentoring and practical experiences**			
	a. Mentoring	Programmes with evaluations BB/BSA Meta-analysis DuBois et al. (2011); Wheeler, Keller & DuBois (2010) [INT]	Programmes with evaluations BB/BSA Meta-analysis DuBois et al. (2002, 2011); Wheeler, Keller & DuBois (2010) [INT]	Programmes with evaluations BB/BSA Meta-analysis DuBois et al. (2002, 2011)
	b. Volunteering		Longitudinal studies CSGVP [CAN]	
	c. Outdoor adventure programmes	Meta-analysis Hans (2000) [AUS, USA]; Wilson and Lipsey (2000) [INT]; Gillis & Speelman (2008)**	Meta-analysis Wilson and Lipsey (2000) [INT]; Gillis and Speelman (2008)**	Meta-analysis Wilson and Lipsey (2000) [INT]; Gillis and Speelman (2008)**

Note: * Early childhood; (*) Early childhood and childhood; ** Adolescence and adulthood

The country is indicated in square brackets when the study uses data from a non-United States country. [INT] refers to a meta-analysis covering studies from multiple countries.

ABC: Abecedarian Programme; BB/BSA: Big Brothers/Big Sisters of America; CSC: Caring School Community; CPC: Chicago Child–Parent Center; ECLS-K: Early Childhood Longitudinal Study, Kindergarten cohort; EHS: National Early Head Start Research and Evaluation Project (including EHS Father Study's Project); FDRP: Syracuse Family Development Research Program; ICPS: I Can Problem Solve; JSS: IY: Incredible Years®; Jamaican Supplementation Study; MCS: Millennium Cohort Study; MMH: Michigan Model for Health; NLSCY: National Longitudinal Survey of Children and Youth; NLSY: National Longitudinal Survey of Youth; OCP: Open Circle Program; PA: Positive Action; PATHS: Promoting Alternative Thinking Strategies; PDP: Pathways to Desistance Project; RCCP: Resolving Conflict Creatively Program; RC: Responsive Classroom; RULER: RULER Approach; SDM/PS: Social Decision Making/Problem Solving SSDP: Seattle Social Development Project; TGV: Too Good for Violence; TREE: Transitions from Education to Employment

Table 4.1B. Summary of results from Japanese studies

Domains		Achieving goals	Working with others	Managing emotions
Examples of social and emotional skills		Perseverance, motivation, self-regulation, attention, self-efficacy, locus of control	Social skills, pro-sociality, cooperativeness, tolerance, empathy	Self-esteem, self-confidence, internalising and externalising behavioural problems
Family	**Direct role of parenting**			
	a. Strengthening parent-child relationship through family rituals and routines	Cross-sectional studies Takeuchi et al. (2011)	Longitudinal studies Japan Children's Study* Cross-sectional studies Hamano and Uchida (2012)* Akimitsu and Muramatsu (2011) Ishii et al. (2011) Takeuchi et al. (2011) Togasaki and Sakano (1997)	Programmes with evaluations Fujiwara et al. (2011)* Cross-sectional studies Kanie et al. (2006) Hiramura et al. (2010) NIYE (2010) Hamano and Uchida (2012)*
	Indirect family-related factors			
	a. Television viewing time and contents	-	Longitudinal studies Better Broadcasting for Children Project* Cross-sectional studies Sumitani and Muto (2010) Kano et al. (2007)	Longitudinal studies Japan Children's Study*
	b. Parental involvement in school	-	-	-
	c. Household socio-economic background	-	Cross-sectional studies Japan Child Panel Survey	Cross-sectional studies Japan Child Panel Survey
	d. Maternal mental health	Longitudinal studies Kawasaki project*	Programmes with evaluations Cheng et al. (2007)* Longitudinal studies Japan Child Panel Survey Ishii et al. (2011)	Programmes with evaluations Cheng et al. (2007)* Longitudinal studies Kawasaki project* Japan Child Panel Survey
School	**Direct role of classroom instruction**			
	a. Specific lessons targeting social and emotional skills	Programmes with evaluations (no control group) Successful Self 1 and 2	Programmes with evaluations Komatsu and Hida (2009) Watanabe and Harada (2007) Fujieda and Aikawa (2001) Programmes with evaluations (no control group) Harada (2014) Makino (2011) Emura and Okayasu (2003) Successful Self 1 and 2	Programmes with evaluations Kawai et al. (2006) Programmes with evaluations (no control group) Emura and Okayasu (2003) Successful Self 1 and 2
	b. Embedding social and emotional learning in core academic subjects	-	Programmes with evaluations (no control group) Ikejima and Fukui (2012) Ikejima et al. (2004)	-
	c. Peer support approaches	-	Programmes with evaluations	-

Domains		Achieving goals	Working with others	Managing emotions
			Japanese Peer Support Program	
	Direct role of extra-curricular activities			
	a. Clubs and other after-school programmes	-	Cross-sectional studies Aoki (2005)	-
	b. Service learning programmes	-	-	-
	c. Apprenticeships and job training	-	-	-
	Indirect role of school/classroom climate			
	a. School/classroom climate	-	Cross-sectional studies Takahashi, Kawashima and Yoshikawa (2010) Programmes with evaluations Komatsu and Hida (2009) Fujieda and Aikawa (2001)	Cross-sectional studies Udagawa and Shimoda (2013)
Community	**Direct role of mentoring and practical experiences**			
	a. Mentoring	Programmes with evaluations (no control group) Kurita (2014)	Programmes with evaluations (no control group) Kurita (2014)	Programmes with evaluations (no control group) Kurita (2014)
	b. Volunteering	Programmes with evaluations (no control group) Baba, Shima and Oya (2006)	Cross-sectional studies Midzuno and Kato (2007)	Longitudinal studies NIYE (2010) (retrospective)
	c. Outdoor adventure programmes	Programmes with evaluations (no control group) Kataoka et al. (2011) Yasunami et al. (2006) Nakagawa et al. (2005) Ihara et al. (2004)	Programmes with evaluations (no control group) Nakagawa et al. (2005)	-

Note: * Early childhood; (*) Early childhood and childhood; ** Adolescence and adulthood

Implications for families and school

The evidence presented in this paper, while being not exhaustive, provides useful implications for parents and teachers to reflect on their approaches to children's social and emotional development. The following summarises the key messages:

- **Schools interested in introducing activities to develop children's social and emotional skills** may benefit from considering interactive, proactive, reflective, practical, intentional and experiential form of learning. This does not necessarily involve major curricular reform or introduction of new social and emotional learning classes. Some successful programmes have introduced creative approaches in existing curricular activities (e.g. solving maths problems in a group, improving the classroom climate in which students feel open to express their views and challenge particular ideas, models and theories). Extra-curricular activities can also provide alternative and/or complementary means to enhance the effectiveness of curricular approaches.

- **Schools that already have in place social and emotional learning programmes** may benefit from reviewing whether (a) teachers have sufficient skills to guide the learning process; (b) parents are well informed about the programme and have the capacity to provide socio-emotionally nurturing environment at home; and (c) learning contexts across the school, family and the community are broadly consistent. They can also reflect if they can learn from other successful programmes.

- **Parents interested in further fostering children's social and emotional skills** may benefit from strengthening parent-child relationship while respecting children's autonomy. Family rituals and routines, such as reading books and having meals together with their children, may help stimulate children's social and emotional as well as cognitive skills.

- **Parents** may consider encouraging children to participate in community programmes and learn from the community. The community, for instance through its volunteering and outdoor programmes, offers an attractive environment for children to learn how to communicate with others, ways to deal with real-life situations, and ways to be responsible for managing their own lives.

- **Teachers and parents** may benefit from making joint-efforts to nurture children's social and emotional skills, and to regularly inform each other activities and progress made. The success of school-based efforts may hinge on the continuity of social and emotional development taking place at home. Parenting practices at home could be more effective if parents are well informed about children's behaviours and learning activities at school. Well-designed school-based training programmes can help establish such a holistic approach.

Implications for future research in Japan

Some of the existing evidence on social and emotional skills are powerful and provide useful insights for parents and teachers to improve ongoing practices. However, most of them are based on programmes and micro-data from the United States, and there is paucity of evidence from other countries including Japan. The international research community may also usefully continue their efforts to expand studies based on a range of rigorous evaluation of intervention programmes and on large-scale longitudinal data that cover different population groups. What are the implications for future research in Japan in light of the limited number and scope of existing Japanese evidence? This paper suggests that further efforts could be made in the following areas:

Collecting and better exploiting micro-data on a range of social and emotional skills

There still appears a shortage of micro-data and empirical evidence that shed light on the developmental pathways of social and emotional skills in Japan. Although social and emotional skills are important predictors of social and economic outcomes, a majority of micro-data available in Japan tracks only students' academic skills. Even among those studies measuring social and emotional skills, many of them use measurement instruments that are noisy and biased. It would be useful to consider refining measures of social and emotional skills and applying them to research. Moreover, longitudinal data can be useful for understanding the impact of learning contexts on skills, as well as the impact of skills on long-term outcomes.

Evaluating effectiveness of interventions in raising social and emotional skills

Schools and community organisations are increasingly introducing programmes with the aim to improve children's social and emotional skills. While this paper has identified a number of promising school-based and community-based programmes in Japan, they were not necessarily accompanied by quality evaluation schemes. Intervention programmes that are specifically designed to be precisely assessed (e.g. randomised control trials) can provide invaluable information for education policies and practices. Interventions integrating appropriate data collection and analysis in the programme design are expected to expand.

REFERENCES

Aber, J.L. et al. (1998), "Resolving conflict creatively: Evaluating the developmental effects of a school-based violence prevention program in neighborhood and classroom context", *Development and Psychopathology*, Vol. 10, pp.187-213.

Aber, J.L., J.L. Brown and S.M. Jones (2003), "Developmental trajectories toward violence in middle childhood: Course, demographic differences, and response to school-based intervention", *Developmental Psychology*, Vol. 39, pp. 324-348.

Akimitsu, K. and Y. Muramatsu (2011), "The influence of fathers' involvement on school-aged children's sociability", *Hyogo University of Teacher Education Journal*, Vol. 38, pp. 51-61.

Ando, M. (2010), "Psychoeducational program to prevent emotional and behavioral problems among junior high school students: Outcome evaluation for Successful Self 2", *Bulletin of Graduate School of Education, Okayama University*, Vol. 144, pp. 27-37.

Ando, J. et al. (2006), "The Tokyo Twin Cohort Project: Overview and initial findings", *Twin Research and Human Genetics*, Vol. 9/6, pp. 817-826.

Ando, M. (2008), "Psychoeducational approach to prevent emotional and behavioral problems among fourth graders in an elementary school", *Bulletin of Research and Development Center for Educational Practice, Okayama University*, Vol. 8/1, pp. 89-98.

Anme, T. et al. (2012), "Center-based child extended care: Implications for young children's development in a five-year follow-up", *Sociology Mind*, Vol. 2/4, pp. 435-440.

Anme, T. et al. (2010), "Interaction Rating Scale (IRS) as an evidence-based practical index of children's social skills and parenting", *Journal of Epidemiology*, Vol. 20, pp. 419-426.

Anme, T. et al. (2007), "The validity and reliability of Interaction Rating Scale (IRS): Characteristics for children with behavioral or environmental difficulties", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 14/1, pp. 23-31.

Anme, T. and J. Oh (2000), "Evaluation of child night care in nursery", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 7/1, pp. 7-18. Aoki, K. (2005), "Social skills of high school athletes and its correlates", *Journal of National Olympics Memorial Youth Center*, Vol. 5, pp. 25-34.

Aoki, T. et al. (2013), "The effects of peer mediation program compact on elementary students: From the point of view of self-efficacy and school adjustment", *Bulletin of the Graduate School of Education, Hiroshima University, Part I, Learning and Curriculum Development*, Vol. 62, pp. 1-7.

Aoki, T. et al. (2007), "The influence of parenting attitudes and everyday activities over social skills and the sense of well-being in elementary school students", *Bulletin of the Graduate School of Education, Hiroshima University, Part I, Learning and Curriculum Development*, Vol. 56, pp. 21-28. Araki, E., T. Okamura and H. Hamatani (2007), "The effect of activities for effective processing in adventure education program on participant's personal development", *Japan Outdoor Education Journal*, Vol. 11/1, pp. 37-50.

Baba, Y., K. Shima and K. Oya (2006), "A consideration on students' volunteer activities and changes on their social skills (Saga Junior College)", *Journal of Nishikyushu University & Saga Junior College*, Vol. 36, pp. 155-162.

Belfield, C. et al. (2015), *The Economic Value of Social and Emotional Learning*, Center for Benefit-Cost Studies in Education, Teachers College, Columbia University.

Benesse Corporation (2014), *Dai-1-kai Youjiki no Katei Kyouiku Chousa / Judan Chousa (3-saiji – 4-saiji) [The longitudinal study on home education during early childhood: the first wave (three- to four-year-olds)]*, http://berd.benesse.jp/up_images/textarea/research3684_paper.pdf (accessed on 10 January 2015).

Bolli, T. and S. Hof (2014), "The impact of apprenticeship training on personality traits: an instrumental variable approach", *KOF Working Papers No. 350*.

Brackett, M.A. et al. (2012), "Enhancing academic performance and social and emotional competence with the RULER Feeling Words Curriculum", *Learning and Individual Differences*, Vol. 22, pp. 218-224.

Brock, L.L. et al. (2008), "Children's perceptions of the social environment and social and academic performance: A longitudinal analysis of the Responsive Classroom approach", *Journal of School Psychology*, Vol. 46, pp. 129-149.

Carneiro, P.M. and J.J. Heckman (2003), "Human capital policy", in *Inequality in America: What Role for Human Capital Policy?*, J.J. Heckman and A.B. Krueger (eds.), MIT Press, Cambridge, MA.

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. 34/2, pp. 164-181.

Cheng, S. et al. (2010), "Early television exposure and children's behavioral and social outcomes at age 30 months", *Journal of Epidemiology*, Vol. 20/Supplement II, pp. S482-S489.

Cheng, S. et al. (2010), "Comparison of factors contributing to developmental attainment of children between 9 and 18 months", *Journal of Epidemiology*, Vol. 10/Supplement II, pp. S452-S458.

Cheng, S. et al. (2009), "Contribution of parenting factors to the developmental attainment of 9-month-old infants: results from the Japan Children's Study", *Journal of Epidemiology*, Vol. 19/16, pp. 319-327.

Cheng, S. et al. (2007), "The effectiveness of early intervention and the factors related to child behavioural problems at age 2: A randomized controlled trial", *Early Human Development*, Vol. 83/10, pp. 683-691.

Christakis, D.A. et al. (2004), "Early television exposure and subsequent attentional problems in children", *Pediatrics*, Vol. 113/4, pp. 708-713.

Collaborative for Academic, Social, and Emotional Learning (2012), *CASEL Guide: Effective Social and Emotional Learning Programs - Preschool and Elementary School Edition*, Collaborative for Academic, Social, and Emotional Learning, Chicago, IL.

Covay, E. and W. Carbonaro (2010), "After the bell: Participation in extracurricular activities, classroom behavior, and academic achievement", *Sociology of Education*, Vol. 83/1, 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, pp. 738-782.

Cunha, F. and J.J. Heckman (2007), "The technology of skill formation", *American Economic Review*, Vol. 97/2, pp. 31-47.

Dee, T.S. and M.R. West (2011), "The non-cognitive returns to class size", *Educational Evaluation and Policy Analysis*, Vol. 33/1, pp. 23-46.

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.

El Nokali, N.E., H.J. Bachman and E. Votruba-Drzal (2010), "Parent involvement and children's academic and social development in elementary school", *Child Development*, Vol. 81/3, pp. 988-1005.

Emura, R.A. and T. Okayasu (2003), "Classroom-based social skills education: Junior high school students", *Japanese Journal of Educational Psychology*, Vol. 51/3, pp. 339-350.

Feist, G.J. (1998), "A meta-analysis of personality in scientific and artistic creativity", *Personality and Social Psychology Review*, Vol. 2/4, pp. 290-309.

Fletcher, J. and B. Wolfe (2012), "The importance of family income in the formation and evolution of non-cognitive skills in childhood", *Centre for Economic Policy Research Discussion Paper Series*, Vol. 665.

Frank, R.G. and E. Meara (2009), "The Effect of Maternal Depression and Substance Abuse on Child Human Capital Development", *National Bureau of Economic Research Working Paper Series*, Vol. No. 15314.

Fujieda, S. and A. Aikawa (2001), "Classwide social skills training: Elementary school", *Japanese Journal of Educational Psychology*, Vol. 49/3, pp. 371-381.

Fujiwara, T., N. Kato and M.R. Sanders (2011), "Effectiveness of group Positive Parenting Program (Triple P) in changing child behavior, parenting style, and parental adjustment: An intervention study in Japan", *Journal of Child and Family Studies*, Vol. 20/6, pp. 804-813.

Gillis, H.L. and E. Speelman (2008), "Are challenge (ropes) courses an effective tool? A meta-analysis", *Journal of Experiential Education*, Vol. 31/2, pp. 111-135.

Gregg, P. et al. (2005), "The effects of a mother's return to work decision on child development in the UK", *The Economic Journal*, Vol. 115/501, pp. F48-F80.

Grossman, D.C. et al. (1997), "Effectiveness of a violence prevention curriculum among children in elementary school: A randomized controlled trial", *Journal of American Medical Association*, Vol. 277, pp. 1605-1611.

Gutman, L.M. and I. Schoon (2013), *The Impact of Non-Cognitive Skills on Outcomes for Young People: Literature Review*, Institute of Education, University of London, London.

Hall, M. et al. (2009), *Caring Canadians, Involved Canadians: Highlights from the 2007 Canada Survey of Giving, Volunteering and Participating*, Statistics Canada, Ottawa.

Halpern, D.F. (1998), "Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring", *American Psychologist*, Vol. 53/4, pp. 449-455.

Hamano, T. and N. Uchida (2012), "Youjiki ni okeru yomikaki nouryoku no kakutoku to sono kankyou youin no eikyou ni kansuru kokusai hikaku kenkyuu" [International comparative research on literacy acquisition process during early childhood and effects of environmental factors on it], *Ochanomizu Research Center for Human Development and Education Annual Report*, Vol. 4, pp. 13-41.

Hans, T. (2000), "A meta-analysis of the effects of adventure programming on locus of control", *Journal of Contemporary Psychotherapy*, Vol. 30/1, pp. 33-60.

Harada, M. (2006), *Next Generation Support and Transfiguration of Parenting: Child Abuse Prevention and Parenting Site in Hyogo Report*, Nagoya University Press, Nagoya.

Harada, E. (2014), "The practice of social skills training in the first grade students", *Journal of Tokyo University of Information Sciences*, Vol. 17, pp. 1-11.

Hattori, S. and M. Harada (1991), *Nyuuyouji no Shinshin Hattatsu to Kankyou: Osaka Report to Seishin Igakuteki Shiten [Infant Psychophysical Development and Environment: Osaka Report and Psychiatric Perspective]*, Nagoya University Press, Nagoya.

Herrera, C. et al. (2007), *Making a Difference in Schools: The Big Brothers Big Sisters School-based Mentoring Impact Study*, Public/Private Ventures, Philadelphia, PA.

Hille, A. and J. Schupp (2015), "How learning a musical instrument affects the development of skills", *Economics of Education Review*, Vol. 44, pp. 56-82.

Hiramura, H. et al. (2010), "Understanding externalizing behavior from children's personality and parenting characteristics", *Psychiatry Research*, Vol. 175/1–2, pp. 142-147.

Holsen, I., B.H. Smith and K.S. Frey (2008), "Outcomes of the social competence program Second Step in Norwegian elementary schools", *School Psychology International*, Vol. 29, pp. 71-88.

Horikawa, R. and K. Shibayama (2014), "The effect of a class-sized psychological education program for self-esteem improvement and anxiety reduction in children", *Memoirs of the Faculty of Education, Kumamoto University*, Vol. 63, pp. 133-140.

Huerta, M.C. et al. (2013), "Fathers' leave, fathers' involvement and child development: Are they related? Evidence from four OECD countries", *OECD Social, Employment and Migration Working Papers*, No. 140, OECD Publishing, Paris, http://dx.doi.org/10.1787/5k4dlw9w6czq-en.

Ihara, K. et al. (2004), "The effects of adventure education program on general self-efficacy of early adolescents", *Japan Outdoor Education Journal*, Vol. 7/2, pp. 13-22.

Ikejima, T. and A. Fukui (2012), "Peer support program for cooperative learning", *Bulletin of School of Professional Development in Education, Nara University of Education*, Vol. 4, pp. 55-60.

Ikejima, T. et al. (2005), "The development of lesson plans "the activities of the conflict resolution" for getting the formative ability of human relations in elementary school for sixth", *Bulletin of Center for Educational Research and Development*, Vol. 14, pp. 133-139.

Ikejima, T. et al. (2004), "A study on the activities and effects of classwide peer-support program in elementary school for fifth", *Bulletin of Center for Educational Research and Development*, Vol. 13, pp. 127-136. Ishii, Y. et al. (2011), "Maternal stress, parenting factors, experiences in day care, and developmental outcomes in 5-year-old children in day care in Japan", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 18/1, pp. 148-159.

John, O.P. and S. Srivastava (1999), "The Big Five trait taxonomy: History, measurement, and theoretical perspectives", *Handbook of Personality: Theory and Research*, L.A. Pervin and O.P. John (eds.), 2nd ed. Guilford Press, New York, NY, pp. 102-139.

Jones, S.M., J.L. Brown and J.L. Aber (2011), "Two-year impacts of a universal school-based social-emotional and literacy intervention: An experiment in translational developmental research", *Child Development*, Vol. 82, pp. 533-554.

Kan, M. (2012), "Effects of maternal employment on adolescent behavior and academic outcomes: Evidence from Japanese micro data", *Center for Intergenerational Studies (CIS) Discussion Paper Series*, Vol. 541.

Kanie, N., K. Iwasaki and K. Makino (2006), "Effects of parent's academic background and child's gender on educational resources in the family: in relation to child's perception of family atmosphere and self-esteem", *The 21st Century College of Education (COE) Program Studies of Human Development from Birth to Death Research Monograph: Studies of Human Development*, Ochanomizu University, Tokyo, pp. 105-108.

Kano, A. et al. (2007), "Relation of television and video watching time to development of children aged three and a half years", *The Journal of the Japan Pediatric Society*, Vol. 111/3, pp. 454-461.

Kataoka, M. et al. (2011), "Girl scout keiken ga chukousei joshi no jiko kouteikan ni ataeru eikyou" [Effects of girl scout experience on self-esteem of junior high and high school girls], *Annual Convention of the Japanese Association of Educational Psychology*, Vol. 53, pp. 547.

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, Paris, http://dx.doi.org/10.1787/5jxsr7vr78f7-en.

Kawai, E. et al. (2006), "Evaluation of a training program to prevent deterioration of children's self-esteem: Fostering children's skills in arguing against self-defeating cognitions about negative events", *Japanese Journal of Educational Psychology*, Vol. 54/1, pp. 112-123.

Keio University Joint Research Center for Panel Studies (2008), *Nihon Kodomo Panel Chousa no Gaiyou [Outline of the Japan Child Panel Survey]*, http://www.pdrc.keio.ac.jp/open/post.html (accessed on 10 January 2015).

Kiernan, K.E. and M.C. Huerta (2008), "Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood", *The British Journal of Sociology*, Vol. 59/4, pp. 783-806.

Kikawada, M. et al. (2006), "Maternal stress and implications for the development of four-year-old children placed in center-based care", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 12/2, pp. 15-24.

Komatsu, H. and M. Hida (2009), "The effect of experience of group activity upon children's social skills: Self-consciousness, evaluation of classroom, and social skills", *Bulletin of Center for Research and Development of Education, Fukushima University*, Vol. 7, pp. 85-92.

Komatsu, H. and M. Hida (2008), "The influences of children's self-evaluation and evaluation of classroom", *Bulletin of Center for Research and Development of Education, Fukushima University*, Vol. 5, pp. 9-16.

Kurita, A. (2014), "The consideration about contents and effects of mental friends' activity: A investigation the actual situation for child consultation center and a case study of mental friend", *Bulletin of Teikyo University Junior College*, Vol. 18, pp. 175-183.

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.

Lian, T. et al. (2011), "Predictors of working mother's parenting practices in infancy on the competences of vocabulary and communication of two-year-old children", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 18/1, pp. 94.

Lubart, T.I. (1994), *Creativity in Thinking and Problem Solving*, ed. R.J. Sternberg, Academic Press, San Diego, CA.

Lucas-Thompson, R.G., W.A. Goldberg and J. Prause (2010), "Maternal work early in the lives of children and its distal associations with achievement and behavior problems: A meta-analysis", *Psychological Bulletin*, Vol. 136/6, pp. 915-942.

Makino, K. (2011), "A development of the communication skills training for junior high school students (4): The effects of communication skills training on self-evaluation", *Journal of Business Administration and Information, Setsunan University*, Vol. 18/2, pp. 107-118.

Melchior, A. et al. (1999), *Summary Report: National Evaluation of Learn and Serve America*, Brandeis University, Waltham, MA.

MEXT (2005), *FY2004 White Paper on Education, Culture, Sports, Science and Technology*, MEXT, Tokyo.

Midzuno, K. and T. Kato (2007), "Do volunteer activities effect psychological growth of participants?: An examination on the basis of relations among experience of volunteer activities, personality traits, social skills, senses of fulfillment, and views of activities", *The Seisen Review*, Vol. 15, pp. 141-156.

Milligan, K. and M. Stabile (2011), "Do child tax benefits affect the well-being of children? Evidence from Canadian child benefit expansions", *American Economic Journal: Economic Policy*, Vol. 3/3, pp. 175-205.

Milligan, K. and M. Stabile (2009), "Child benefits, maternal employment, and children's health: Evidence from Canadian child benefit expansions", *American Economic Review*, Vol. 99/2, pp. 128-32.

Mimizuka, H., J. Wang and Y. Tarumi (2012), "Japan Educational Longitudinal Study", *Ochanomizu University Research Center for Human Development and Education Annual Report*, Vol. 4, pp. 59-61.

Muñiz, E.I., E.J. Silver and R.E.K. Stein (2014), "Family routines and social-emotional school readiness among preschool-age children", *Journal of developmental and behavioral pediatrics*, Vol. 35/2, pp. 93-99.

Nakagawa, M. et al. (2005), "The effects of long-term and short-term camping on IKIRU CHIKARA (Zest for Living) of early adolescents", *Japan Outdoor Education Journal*, Vol. 8/2, pp. 31-43.

National Institute for Educational Policy (2008), *"Shakaisei no Kiso" o Hagukumu "Kouryuu Katsudou", "Taiken Katsudou": "Hito to Kakawaru Yorokobi" o Motsu Jidou Seito ni ["Exchange Activities" and "Experiential Activities" to Foster "Basic Sociality": Towards Students Who Have "Joy in Engaging with Others"]*, National Institute for Educational Policy Research Guidance and Counseling Research Center, Tokyo.

National Institution for Youth Education (2010), *Kodomo no Taiken Katsudo no Jittai ni Kansuru Chosa Kenkyu Hokokusho [Research Report on the Actual Conditions of Children's Experience Programmes]*, National Institution for Youth Education, Tokyo.

NHK Broadcasting, Culture Research Institute (2010), *Television and Japanese Children: A Longitudinal Study from Zero to Twelve - Interim Report from Zero to Five*, NHK Broadcasting, Culture Research Institute, Tokyo.

NICHD (1999), "Chronicity of maternal depressive symptoms, maternal sensitivity, and child functioning at 36 months", *Developmental Psychology*, Vol. 35, pp. 1297-1310.

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

Nozaki, K. (2013), "The effect of maternal employment in early childhood on the child's later development", in *Hatarakikata to Koufukukan no Dainamizumu [Dynamism of Working Styles and a Sense of Happiness]*, Y. Higuchi et al. (eds.), Keio University Press, Tokyo, pp. 103-120.

OECD (2015), *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.

OECD (2010), *Improving Health and Social Cohesion through Education*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264086319-en.

OECD (2006), *Are Students Ready for a Technology-Rich World?: What PISA Studies Tell Us*. OECD Publishing, Paris, www.oecd.org/dataoecd/28/4/35995145.pdf.

Omi, R. and A. Sakamoto (2005), "Terebi sesshoku ga kodomo no ninchi nouryoku, jouhou katsuyou no jissenryoku, kougekisei, koushakaisei ni ataeru eikyou: Shougakusei o taishou to shita 2-ha panel kenkyuu" [Influence of television exposure on children's cognitive skills, practical skills to use information, aggression and pro-sociality: Two-wave panel study on elementary school students], in *"The Better Broadcasting for Children" the Second-round Study Report*, NHK Broadcasting Culture Research Institute, Tokyo, pp. 60-69.

Parkes, A. et al. (2013), "Do television and electronic games predict children's psychosocial adjustment? Longitudinal research using the UK Millennium Cohort Study", *Archives of Disease in Childhood*.

Promising Practices Network (2014), *Programs that Work*, Promising Practices Network, http://www.promisingpractices.net/programs.asp (accessed on 10 January 2015).

Rimm-Kaufman, S.E. and Y.I. Chiu (2007), "Promoting social and academic competence in the classroom: An intervention study examining the contribution of the Responsive Classroom approach", *Psychology in the Schools*,Vol. 44, pp. 397-413.

Rotter, J.B. (1990), "Internal versus external control of reinforcement: A case history of a variable", *American Psychologist*, Vol. 45/4, pp. 489-493.

Ruhm, C.J. (2004), "Parental employment and child cognitive development", *Journal of Human Resources*, Vol. XXXIX/1, pp. 155-192.

Shaw, D.S. (2014), "Parenting programs and their impact on the social and emotional development of young children, 2nd ed.", *Encyclopedia on Early Childhood Development*, http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/654/parenting-programs-and-their-impact-on-the-social-and-emotional-development-of-young-children.pdf (accessed on 10 January 2015).

Shibuya, A. et al. (2004) "Media bouryoku eno sesshoku, sesshoku kankyou ga kougekisei ni oyobosu choukiteki eikyou: shougakusei eno panel chousa" [Long-term influence of exposure to violence in media and exposure contexts on aggression: Panel study on elementary school students], *The 45th Conference for the Japanese Society of Social Psychology*, pp. 248.

Schick, A. and M. Cierpka (2005), "Faustlos: Evaluation of a curriculum to prevent violence in elementary schools", *Applied and Preventive Psychology*, Vol. 11, pp. 157-165.

Shikishima, C., J. Yamashita and H. Akabayashi (2012), "Kodomo no shakaisei, tekioukan to katei haikei" [Child's social skills / quality of life and family background], in *Oyako Kankei to Kakei Koudou no Dynamism [Dynamism of Parent-Child Relationship and Household Behaviour]*, Y. Higuchi et al. (eds.), Keio University Press, Tokyo, pp. 25.

Shinohara, R. et al. (2011), "Does a mother's praise foster her child's social competence?", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 18/1, pp. 125-134.

Shinohara, R. et al. (2010), "The trajectory of children's social competence from 18 months to 30 months of age and their mother's attitude towards the praise", *Journal of Epidemiology*, Vol. 20/Supplement II, pp. S441-S446.

Solomon, D. et al. (2000), "A six-district study of educational change: Direct and mediated effects of the child development project", *Social Psychology of Education*, Vol. 4, pp. 3-51.

Soto, C.J. et al. (2011), "Age differences in personality traits from 10 to 65: Big-Five domains and facets in a large cross-sectional sample", *Journal of Personality and Social Psychology*, Vol. 100, pp. 330-348.

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, pp. 47-58.

Sugawara, M. (2011), "Media riyou jikan to kodomo no personality youin tono kankei" [Association between media use time and children's personality factors], in *The Better Broadcasting for Children: the Seventh- and Eighth-rounds Follow-up Study Report*, NHK Broadcasting Culture Research Institute, Tokyo, pp. 51-55.

Sugawara, M. (2010), *A Multi-Cohort Study of Social Adjustment in Childhood: From the Developmental Psychological Approach - Grants-in-Aid for Scientific Research Final Report.*

Sugawara, M. (2005), "Nyuuyoujiki no shinshin no hattatsu to media sesshoku" [Mental and physical development during infancy and early childhood and contact with media], in "*The Better Broadcasting for Children" the Second-round Study Report*, NHK Broadcasting Culture Research Institute, Tokyo, pp. 34-49.Sugawara, M. et al. (2006), "A longitudinal study of relationships between maternal employment and child problem behaviours", *The 21st Century COE Program Studies of Human Development from Birth to Death Research Monograph: Studies of Human Development*, Ochanomizu University, Tokyo, pp. 45-50.

Sugawara, M. et al. (2005), "Nyuujiki no hattatsu to eizou media sesshoku: Eikyousei ni kansuru inga suitei no kanousei o sagutte" [Infant development and visual media exposure: Exploration of possibility of causal inference about the influence], *Baby Science*, Vol. 5, pp. 46-53.

Sugawara, M. et al. (1999), "Longitudinal relationship between maternal depression and infant temperament in a Japanese population", *Journal of Clinical Psychology*, Vol. 55/7, pp. 869-880.

Sumitani, S. and T. Muto (2010), "The longitudinal influence of television programs wached in childhood on social and psychological maladjustment in puberty", *Bulletin of Joetsu University of Education*, Vol. 29, pp. 101-112.

Takahashi, S., Y. Kawashima and E. Yoshikawa (2010), "An examination of school group and social skills (1)", *The Seisen Review*, Vol. 18, pp. 1-13.

Takahashi, Y., B.W. Roberts and T. Hoshino (2012), "Conscientiousness mediates the relation between perceived parental socialisation and self-rated health", *Psychology & Health*, Vol. 27/9, pp. 1048-1061.

Takeuchi, M.S. et al. (2011), "The relationship of temperament and character dimensions to perceived parenting styles in childhood: A study of a Japanese university student population", *The Open Family Studies Journal*, Vol. 4, pp. 9-14.

Taki, M. (2009), *Kaiteishinban Peer Support de Hajimeru Gakkou Zukuri: Shougakkou Hen [School Development with Peer Support: For Elementary School, Revised Edition]*, Kaneko Shobo, Tokyo.

Taki, M. (2004), *Kaiteishinban Peer Support de Hajimeru Gakkou Zukuri: Chuugakkou Hen [School Development with Peer Support: For Junior High School, Revised Edition]*, Kaneko Shobo, Tokyo.

Tanaka, E. et al. (2010), "Implications of social competence development among eighteen month toddlers", *Japanese Journal of Human Sciences of Health-Social Services*, Vol. 16/1, pp. 57-66.

Tierney, J.P., J.B. Grossman and N.L. Resch (2000), *Making a Difference: An Impact Study of Big Brothers Big Sisters*, Public/Private Ventures, Philadelphia, PA.

Togasaki, Y. and Y. Sakano (1997), "Effects of mother's attitude for child rearing on social skills and school adaptation in elementary school children: From the point of view of the attitude for child rearing of active refusal type", *Japanese Journal of Educational Psychology*, Vol. 45/2, pp. 173-182.

Toppe, C.M., A.D. Kirsch and J. Michel (2001), *Giving and Volunteering in the United States: Findings from a National Survey*, INDEPENDENT SECTOR, Washington, DC.

Uchida, N. and Y. Ishida (2011), "What counts the most for early literacy acquisition?: Japanese data from the cross-cultural literacy survey of GCOE project", *Proceedings: Science of Human Development for Restructuring the "Gap Widening Society"*, Vol. 13, pp. 37-44.

Udagawa, S. and Y. Shimoda (2013), "Study about relationship between classroom climate and assertive styles among elementary school students", *Kyoiku Jissen Kenkyu: Bulletin of the Center for Educational Research and Practice, Toyama University*, Vol. 7, pp. 15-20.

Ueno, E., Y. Miyake and E. Katsurada (2009), "Hahaoya no shuugyou ni kansuru ishiki oyobi youiku taido to kodomo no shakaiteki sukiru no kanren ni tsuite" [The association between mother's attitudes towards work and parenting attitudes and child's social skills], *Annual Convention of the Japanese Association of Educational Psychology*, Vol. 51, pp. 314.

Watanabe, K. (2008), *Hiroshima-shi Seishounen Mentor Seido to Mentoring Undou [The Hiroshima City Mentoring Programme and Mentoring Movement]*, Japan Association of Lifelong Education, http://ejiten.javea.or.jp/content.php?c=TWpBeU9ERXdNUT09 (accessed on 10 January 2015).

Watanabe, K. et al. (2012), "Triangular evaluation of eclectic mentoring program: A case of Hiroshima, Japan", *IVth International Conference of Community Psychology*, Universidad de Barcelona, Barcelona, pp. 301.

Watanabe, Y. and E. Harada (2007), "Effects of social skills training on social skills and self-esteem among high school students", *Bulletin of Faculty of Letters, Hosei University*, Vol. 55, pp. 59-72.

Wheeler, M.E., T.E. Keller and D.L. DuBois (2010), "Review of three recent randomized trials of school-based mentoring: Making sense of mixed findings", *Social Policy Report*, Vol. 24/3.

Wickramaratne, P. et al. (2011), "Children of depressed mothers 1 year after remission of maternal depression: findings from the STAR*D-Child study", *American Journal of Psychiatry*, Vol. 168/6, pp. 593-602.

Wilson, S.J. and M.W. Lipsey (2000), "Wilderness challenge programs for delinquent youth: A meta-analysis of outcome evaluations", *Evaluation and Program Planning*, Vol. 23, pp. 1-12.

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.

Yamagata, Z. and JCS Group (2009), *Research Report (Fiscal Year 2004-2008) on R&D Project: Identification of Factors Affecting Cognitive and Behavioral Development of Children in Japan Based on a Cohort Study; Japan Children's Study*, Research Institute of Science and Technology for Society, Tokyo.

Yamamoto, K., S. Araki and K. Kamino (2010), "Empirical study on relation between involvement in extracurricular activities and acquisition of sociality", *Research Reports, Tsuyama Technical College*, Vol. 52, pp. 95-100.

Yasunami, Y. et al. (2006), "The influence of program type at Hyogo Nature School on social and emotional developments in the fifth grade", *Japan Outdoor Education Journal*, Vol. 9/2, pp. 31-43.

ANNEX 1. TYPES OF STUDIES INCLUDED IN THE PAPER

While there are a number of ways of classifying research designs, four prominent research designs relevant to this paper are listed here – experimental, cross-sectional, longitudinal and case study designs.

Experimental design

In experimental studies, investigators verify their hypotheses by randomly assigning their subjects into treatment groups and control groups. Since random assignment ensures that the probability of being assigned to the treatment group is equal for all the subjects, it is possible to assume that there is no difference between the treatment group and the control group in terms of all the conditions except the experiment condition. This assumption allows the conclusion that if there is any difference between the groups, it is caused by the intervention in the experiment.

In the United States, the experimental design has been extensively used in evaluation of educational intervention programmes. For example, the High/Scope Perry Preschool Study in the 1960s randomly assigned 123 children of three and four years old into a programme group that received a high-quality preschool programme and a comparison group who received no preschool programme. The Carolina Abecedarian Project in the 1970s randomly assigned 111 infants to either the early educational intervention group or the control group. Tennessee's Student/Teacher Achievement Ratio (STAR) project in the 1980s randomly assigned 11 571 children and their teachers to small classes and large classes upon entry into kindergarten and were kept in the same track through elementary Grade 3.

However, it is not always possible to assign subjects randomly into different groups in real settings. For example, there are foreseeable ethical issues relating to manipulating the provision of educational intervention.

A quasi-experimental design is the design that takes a similar form to the experimental design in which subjects are not randomly assigned into a treatment group and a control group. For example, the Syracuse Family Development Research Program did not use random assignment and instead compared children who participated in the early childhood programme to “similar” children in other neighbourhoods.

Cross-sectional design

The cross-sectional design is typically characterised by one-time surveys. A cross-sectional design study analyses data collected more or less at the same time to examine associations between variables of interest.

Although many studies using the cross-sectional design try to address causal relationships, attention would be required when interpreting results of these studies, since the cross-sectional design does not allow credible causal conclusions. Firstly, a study with this design only indicates a relationship between variables and cannot identify the direction of the causal relationship. For example, even if there is a correlation between maternal parenting attitudes and children’s social and emotional skills, it does not necessarily indicate an effect of maternal parenting attitudes. It could be that children’s behaviours influence mothers’ attitudes. Secondly, there is also an issue of spurious correlation or omitted variable bias. For example, even if a correlation is found between maternal parenting attitudes and children’s social

and emotional skills, it could be that both of the variables are influenced by family socio-economic characteristics and hence be correlated to each other.

Longitudinal design

The longitudinal design entails repeated observations of the same sample over time. Longitudinal design studies that track the same individuals allow estimation of potential causal relationships. Typical examples of such studies include the National Longitudinal Survey of Youth 1979 (NLYS79) in the United States and the Millennium Cohort Study (MCS) in the United Kingdom.

One of the major issues with the longitudinal design is attrition of participants. While participants drop out from a longitudinal study for various reasons, there may be an important difference between those who drop out and those who continue to participate. If the attrition rate is high, the remaining sample may not be representative of the population, which reduces reliability of research results.

Case study design

A case study investigates a contemporary phenomenon (the "case") in its real-world context. The case study design is typically used when main research questions are "when" and "how" and require extensive and in-depth description of the phenomenon. Case studies are often small scale and their results may not be applied to a wider population. However, they could offer a potential explanation for complex phenomena.

ANNEX 2. SOCIAL AND EMOTIONAL OUTCOMES OF SCHOOL-BASED INTERVENTION PROGRAMMES

Programme name	Age covered	Social and emotional outcomes reported in evaluation studies		
		Achieving goals	Working with others	Managing emotions
4Rs (Reading, Writing, Respect, and Resolution)	Pre K to Grade 8		social competence; hostile attributional biases	Depression; aggressive interpersonal negotiation strategies; aggression
Al's Pals	Pre K to Grade 3	Self-control	Pro-social methods of interpersonal problem-solving; pro-social skills	Coping (seeking support and instrumental coping, venting and aggression); antisocial, aggressive behavior; expression of feelings
Caring School Community (CSC)	K to Grade 6		Interpersonal behaviour in the classroom; social problem solving skills; interpersonal sensitivity, consideration of others' needs and means-ends thinking; pro-social resolution strategies; supportive, friendly and helpful behaviour; commitment to democratic values	Social anxiety reduction
I Can Problem Solve	Pre K to Grade 5	Self-regulation, impatience (behavioural adjustment)	Ability to solve interpersonal problems; social competence; pro-social behaviours	Aggressive behaviours; emotionality; dominance-aggression (behavioural adjustment)
Incredible Years Training Series	Pre K to Grade 2		Social competence	Emotional self-regulation; conduct problems reduction (e. g. noncompliant and aggressive behaviour)
Michigan Model for Health	K to Grade 6		Interpersonal communication skills	Social and emotional health skills
MindUP	Pre K to Grade 8			Optimism; positive affect
Open Circle	K to Grade 5		Social skills	Internalising problems; externalising problems
Peaceworks: Peacemaking Skills for Little Kids	Pre K to Grade 2		Social independence; positive interaction quality; social cooperation	Internalising and externalising problem behaviours

Programme name	Age covered	Social and emotional outcomes reported in evaluation studies		
		Achieving goals	**Working with others**	**Managing emotions**
Promoting Alternative Thinking Strategies (PATHS)	Pre K to Grade 8		Social competence; social problem-solving skills	Social withdrawal; depressive symptoms; anger bias; aggression; externalising behaviours; emotion knowledge skills; emotional recognition skills
Positive Action	Pre K to Grade 12			Violence, negative behaviours
Resolving Conflict Creatively Program (RCCP)	Pre K to Grade 8		Interpersonal negotiation strategies	Aggression/violence; hostile attributional bias; aggressive interpersonal negotiation strategies
Responsive Classroom	K to Grade 6	Assertion	Pro-social with peers; asocial with peers; excluded by peers	Anxious-fearful; aggressive with peers
RULER Approach	K to Grade 8	Attention and learning problems; leadership, study skills	Social skills	
Second Step	Pre K to Grade 8	Self-control; assertiveness	Social competence; cooperation; perspective taking	Internalising problems; aggressive behaviour; externalising problems
Social Decision Making/Problem Solving Program	K to Grade 8		Social problem solving; pro-social behaviour	
Too Good for Violence	K to Grade 8		Personal and social skills; pro-social behaviours	
Tools of the Mind	Pre K to K			Problem behaviours

Source: Collaborative for Academic, Social, and Emotional Learning (2012)

ANNEX 3. LONGITUDINAL DATASETS WITH SKILL MEASUREMENT IN JAPAN

Survey	Year started	Sample at recruitment	Age at recruitment	Response rate at recruitment	Description
Longitudinal study on education at home from early childhood through the first year of elementary school	2012	5,016 mothers with children aged from 3 to 7 from all over Japan participated in the cross-sectional survey in 2012. Among them 1,460 mothers agreed to participate in the longitudinal study.	3-7 years old	35.8% (5,016 out of 14,000)	This longitudinal study has been conducted by the Benesse Educational Research and Development Institute, with the aim of understanding the relationship between education at home from early childhood through the first year of elementary school and children's development, including how children learn, what mothers with elementary school-age children feel children should acquire during early childhood, parental involvement and perception. Self-administered questionnaires are sent by mail once a year, which survey issues including how children use their time, how children prepare for learning, mothers' retrospective reports on children's early childhood, maternal involvement, maternal view for education, paternal division of roles, satisfaction with early childhood institutions and schools, and reading to children (Benesse Corporation, 2014).
Japan Child Panel Survey	2010 (JHPS) and 2011 (KHPS)	JHPS cohort: 457 children from the participating households of the Japan Household Panel Survey (JHPS) KHPS cohort: 657 children from the Keio Household Panel Survey (KHPS)	6-15 years old	48.4% (JHPS); 59.5% (KHPS)	This survey started as an appurtenant survey to household panel surveys that have been carried out by Keio University, for the purpose of investigating the situation of child-bearing at each household and the status of learning by children themselves. Questionnaire surveys have been conducted on the panel surveys' participating households with children in elementary or junior high school. The questionnaires include measures of both cognitive and social and emotional skills (Keio University Joint Research Center for Panel Studies, 2008).

Survey	Year started	Sample at recruitment	Age at recruitment	Response rate at recruitment	Description
Japan Children's Study	2004	465 babies who were born in three dispersed prefectures (Mie, Tottori and Osaka) between August 2004 and April 2006.	4 month old	Information not identified	This birth cohort study started with the aim of investigating factors affecting children's physical and psycho-emotional development. The baseline questionnaire was conducted when children were 4 months old and follow-up surveys have been administered regularly (Yamagata and JCS Group, 2009). Its development outcome measures include "social competence" which is measured by the Interaction Rating Scale (IRS) (Anme et al., 2007). The IRS measures children's social competence with the five subscales (1) autonomy, (2) responsiveness, (3) empathy, (4) motor regulation, and (5) emotional self-regulation. The evaluation is based on observation of a subject's interaction with other people. A high correlation has been reported between the IRS and the SDQ (Anme et al., 2010).
Japan Educational Longitudinal Study (JELS)	2003	1 700 to 2 700 students for each of the four cohorts (elementary school third graders and sixth graders, junior high school third graders and high school third graders) from Kanto region and Tohoku region	8-9, 11-12, 14-15 and 17-18 years old	Information not identified	This cohort study was launched with the aim of obtaining statistical portraits of adolescents' academic abilities and general competence, their aspirations and their life course. It conducts surveys every three years administering academic assessment of students, paper questionnaires for students, parents and teachers and surveys on career choices for high school graduates (Mimizuka, Wang and Tarumi, 2012).
Better Broadcasting for Children Project	2002	The initial main cohort was composed of 1 368 babies born in Kawasaki city between February and July 2002.	Before birth	Information not identified	This longitudinal cohort study was started by the NHK Broadcasting Culture Research Institute, with the purpose of exploring the relationship between determinants and outcomes of children's media use. The project has conducted yearly surveys and published several reports analysing the relationship between children's media use and the family environment, children's everyday life, parents' beliefs about children's media use, parents' control of children's media use, parents' own media use, children's mental/physical development and socio-economic indicators such as parental occupation (NHK Broadcasting, Culture Research Institute, 2010).
Better Environment for Children Project	2002	643 households with children born in Kawasaki city between October 2002 and March 2003	Before birth	Information not identified	The study aims at estimating environmental factors that are related to children's maladjustment behaviours. It administers annual questionnaire surveys to all participating households as well as observational surveys to some of them (Sugawara, 2010).

Survey	Year started	Sample at recruitment	Age at recruitment	Response rate at recruitment	Description
Evaluation of Child Night Care in Nurseries	1998	3 370 children aged 0 to 2 years and their parents	0-2 years	Information not identified	This study started in order to investigate influence of extended hours of nursery care on child development. Questionnaires were administered after one, three and five years from the base year to collect information on characteristics of nursery school care, child-rearing environment, children's characteristics and children's development (Anme and Oh, 2000).
Japan Child Care Cohort Study	1998	1 242 infants in authorised child-day-care centres across Japan, their parents and childcare professionals	1 year	71.5%	The study seeks to investigate factors associated with child development and quality of life. All governmentally authorised child day-care and child night-care centres across Japan participated in the study. Parents with a one-year-old child were surveyed regarding their home environments and childcare professionals evaluated the development of each child in the facility. Follow-up surveys were administered every year (Anme et al., 2012).
Keio longitudinal twin study	1998	1 040 pairs of twins and triplets living in Tokyo and neighbouring cities, identified through the use of official residential records in the Tokyo area	14 to 30 years old	17% (approx. 1 000 pairs out of 6 000)	This study was launched to conduct behavioural genetic studies for various kinds of human psychological traits in adolescence and young adulthood. The variables contain extensive human behavioural and psychological traits including personality, psychiatry, mental health, sociality, cognition, physical traits. Environment of upbringing is measured from several angles including retrospective parenting styles, family cohesion and parent-offspring communication in childhood, assessed both by each twin and by parents (Ando et al., 2006).
Kawasaki Project	1984	1 329 pregnant women who attended an antenatal clinic in Kawasaki city between 1984 and 1986.	Before birth	Information not identified	This long-term longitudinal study was initially started to investigate the relationship between children's behavioural development and maternal characteristics. Children were assessed when they were 5 days, 1 month, 6 months, 18 months, 5 years, 8 years, 10 years 14 years and 18 years old (Sugawara et al., 2006; Sugawara et al., 1999).

Survey	Year started	Sample at recruitment	Age at recruitment	Response rate at recruitment	Description
Osaka Report	1980	All children (about 2 000) born in a city in Osaka Prefecture in 1980	4 months old	83%	This cohort study was started by paediatricians in order to study the mental and physical development of children and its relationship with the family environment. Questionnaires were administered when the children were 4 months old, 7 months old, 11 months old, 18 months old, 42 months old and six to seven years old. Medical examinations were also conducted for some years. The questionnaires included questions about children's development, maternal health, parent-child relationships and other environmental factors (Hattori and Harada, 1991). A similar study was started in Hyogo Prefecture in 2003 (Harada, 2006).

ANNEX 4. PUBLISHED STUDIES IN JAPAN

Strengthening parent-child relationship

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Hamano and Uchida (2012)	Parental discipline style (sharing type, authoritarian type, self-sacrifice type)	Pro-sociality and maladjustment tendencies measured by the Strengths and Difficulties Questionnaire(SDQ)	2 734 preschool-age children (3 to 5 years old) and 1 780 caregivers	Cross-sectional design	The sharing type discipline style was strongly related with development of pro-sociality. In addition, the sharing type was negatively related with maladjustment tendencies (conduct problems, hyperactivity/inattention). The authoritarian type was related with both pro-sociality and maladjustment tendencies, while the relationships were weak.
Takahashi, Roberts and Hoshino (2012)	Perceived parental socialisation of responsibility	Conscientiousness assessed by Japanese version of NEO-Five Factor Inventory	1 485 adults aged 18 to 70 surveyed online	Longitudinal design using retrospective surveys	Perceived parental "socialisation of responsibility" during adolescence is related with conscientiousness in adulthood.
Akimitsu and Muramatsu (2011)	Paternal involvement in parenting (assessed by a 42-item questionnaire answered separately by fathers, mothers and children), maternal parenting attitudes	Sociability assessed by the social skills scales for school	349 students in the fourth grade in a public elementary school and their parents	Cross-sectional design	Direct effects on children's sociability were found for the children's perception of paternal involvement with the children and for maternal positive parenting attitude. It was suggested that a father's perception of his involvement with his child indirectly influences development of the child's sociability through the child's perception and the mother's parenting attitude.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Tong et al. (2011)	Parenting behaviours assessed by a 13-item scale	Vocabulary development, communication capabilities, evaluated by childcare professionals	398 children who entered child care centres at the age one: data were collected at ages 1 and 2 (Child Night Care in Nursery project)	Longitudinal design	Maternal practices of singing songs with their children and playing with them are beneficial to children's vocabulary development one year later. Conversely, punishing children may exacerbate a vocabulary developmental delay. Playing with children is also related to their communication competence and maternal confidence about childrearing is related to children's communication development as well.
Shinohara et al. (2011)	Maternal praise	Social competence measured by Interaction Rating Scale (IRS)	194 mother-child dyads: Assessed when children were 18, 30 months (Japan Children's Study)	Longitudinal design	Mothers' actual praise-related behaviours are related with the trajectory of their children's social competence from 18 months old to 30 months old.
Uchida and Ishida (2011)	Parental discipline style (sharing type, authoritarian type, self-sacrifice type)	Japanese ability and vocabulary measured through individual clinical interviews	2 734 preschool-age children (3 to 5 years old), follow-up tests were administered when the children were in the first grade of elementary school	Cross-sectional design and longitudinal design	Preschool children's vocabulary score has a positive association with the "sharing type" discipline style and a negative association with the "authoritarian type" style, even after controlling for maternal education and household income.
Takeuchi et al. (2011)	Perceived parenting styles (Care / Overprotection) up to the age of 16 measured by the Parental Bonding Instrument (PBI)	Temperament and character dimensions measured by the Temperament and Character Inventory (TCI)	836 university students (113 men and 787 women) who were under 26 years old	Retrospective longitudinal design	A path analysis shows that perceived parenting (parental high care and low overprotection) is associated with low harm avoidance and high persistence and is directly associated with high self-directedness, high cooperativeness and low self-transcendence.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Fujiwara et al. (2011)	Maternal dysfunctional parenting practices (measured by Parenting Scale, PS), mental state (Depression-Anxiety-Stress Scale, DASS) and self-evaluation of parenting (Parenting Experience Survey, PES)	Behavioural problems (measured by SDQ)	115 mothers with 3-year-old children in Kawasaki City	Quasi-experimental design	After a parenting support intervention programme “Group Positive Parenting Program” (Triple P), behavioural problems of children in the intervention group were reduced. In addition, all subscales of the PS, the DASS depression subscale and total scores, as well as ratings for perceived difficulty of parenting in the PES, were significantly reduced in the intervention group alone.
Cheng et al. (2010)	Maternal cognitive stimulation	Development outcomes	284 children, at age 9 months and 18 months (Japan Children's Study)	Longitudinal design	Maternal stimulation at 9 months old was related to childhood development at 9 months old and 18 months old. Environmental stimulation did not have significant relationship with development at 9 months old and 18 months old.
Shinohara et al. (2010)	Maternal attitude towards praise	Social competence measured by Interaction Rating Scale (IRS)	176 children with their parents from two Japanese cities. Assessed when children were 4, 9 and 18 months old. (Japan Children's Study)	Longitudinal design	Continuous parental attitudes towards the importance of "praise" at both 4 and 9 months old are related to an improved level of social competence of the child at 18 months old, after controlling for such factors as children's gender, family type, siblings, maternal and paternal age, careers, educational level and family income.
Tanaka et al. (2010)	Parenting behaviours measured by the Index of Child Care Environment (ICCE)	Responsiveness measured by Interaction Rating Scale (IRS)	172 children (18 months old) and their caregivers (Japan Children's Study)	Cross-sectional design	The responsiveness of children at 18 months old correlated significantly with “having a chance of reading books to child” and “having spousal support for child-rearing.”

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Hiramura et al. (2010)	Perceived parenting styles (Care / Overprotection) measured by the Parental Bonding Instrument (PBI)	Personality measured by the Junior Temperament and Character Inventory (JTCI), and externalising problems (aggression and delinquency) reported by parents measured by the Child Behavior Checklist (CBCL)	946 children in the 5th to 9th grades and their parents	Cross-sectional design	Both aggressive and delinquent children were characterised by low maternal care, high paternal over-protection and low maternal overprotection. Among personality traits, novelty seeking was predicted by low parental care and low paternal and high maternal overprotection.
Cheng et al. (2009)	Cognitive stimulation Supportive co-parenting	Development outcomes	270 children (Japan Children's Study)	Longitudinal design	Maternal cognitive stimulation at 9 months old and supportive co-parenting at 4 months old are related to child development outcomes at 9 months old.
Aoki et al. (2007)	Parental parenting attitudes (“over protectiveness” and “over negative parenting”), everyday activities (pet breeding, volunteering activities, activities in nature)	Social skills (participation in group, maintaining relationships and improving relationships)	182 elementary school students (5th and 6th graders)	Cross-sectional design	Only for girls, paternal over protection was positively associated with behavioural tendency toward improving relationships and maternal negative parenting was negatively associated with behavioural tendency toward maintaining relationships. There was no relationship found between boys’ social skills and parenting attitudes. On the other hand, everyday activities were related with social skills of both boys and girls.
Kanie et al. (2006)	Perceived family atmosphere	Self-esteem	1 118 elementary school third graders, 1 194 elementary school sixth graders and 1 057 junior high school third graders (Japan Educational Longitudinal Study 2003)	Cross-sectional design	Perceived family atmosphere positively correlated with children’s self-esteem. This perception of family atmosphere was negatively related with the parents’ answer “telling the child to study every day,” and was positively related with “helping the child to study” and “taking the child to museums”.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Togasaki and Sakano (1997)	Mother's attitudes for child rearing	Social skills at home, social skills in school	524 elementary school children from 4th to 6th grades	Cross-sectional design	Maternal attitude towards child rearing is related with her child's social skills at home and the social skills at home are related with social skills in school.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Sugawara (2011)	Television viewing time at the ages 0 and 6 years old	Temperament at the ages 0 and 6 years old, measured by the preschool version of the Temperament and Character Inventory	Around 1 000 children, measured annually from age 0	Longitudinal design	Multiple regression analysis shows that the television viewing time of those children who have higher "harm avoidance" of Cloninger's seven-factor model is significantly longer. In the meantime, cross-lagged effects analysis shows that those children who have the harm avoidance tendency tend to watch television longer, rather than the television viewing time affecting children's harm avoidance tendency.
Cheng et al. (2010)	Television viewing time	Behavioural and emotional outcomes measured by SDQ	316 mother-child dyads: assessed when the child was 9, 18 and 30 months old (Japan Children's Study)	Longitudinal design	TV exposure at 18 months old is associated with hyper-activity inattention and pro-social behaviour at 30 months old.
Sumitani and Muto (2010)	Watching dramas, comedy shows, talk shows and music programs on television	Tendency to violate rules and anxiety tendency	1 006 elementary school 5th graders randomly chosen in the Tokyo metropolitan area. The survey was administered annually from February 2001 to February 2004.	Longitudinal design	The results suggested that watching dramas, comedy shows, talk shows and music programmes on television may heighten the social and psychological maladjustment of adolescents. In particular, it was indicated that watching these programmes during fifth and sixth grades might heighten the tendency to violate rules and the anxiety tendency during first and second grades in junior high school.
Kano et al. (2007)	Television viewing time	Social development	1 180 children 36 months of age	Cross-sectional design	Long exposure to TV was related to slower social development.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Sugawara (2005)	Media contact time in one week at age 0 and at age 1	Verbal and non-verbal communication behaviours (assessed by MacArthur Communicative Development Inventories) and overall development (assessed by PDQ of DDST) at age 1	1 150 children (Better Broadcasting for Children Project)	Longitudinal design	Long exposure to TV is related to lower scores in the communicative development test. However, this relationship becomes less significant when the time spent playing outside and the frequency of reading books are controlled. Media exposure has little relationship with general development.
Sugawara et al. (2005)	Television viewing time when child is 0 to 2 years old	Communicative development	1 023 children, age 0	Longitudinal design	Long exposure to TV is related to lower scores in the communicative development test.
Omi and Sakamoto (2005)	Television viewing time	Cognitive test scores; practical skills to use information, aggressiveness, pro-sociality (self-report, only for elementary school 5th graders and junior high school 2nd graders)	98 elementary school 2nd graders, 91 elementary school 5th graders, 59 junior high school 2nd graders who responded to surveys in both 2003 and 2004	Longitudinal design	No effect of television viewing time on cognitive ability was found. For elementary school 5th graders, those who were exposed to television longer at the first time point tended to have lower aggressiveness at the second time point.
Shibuya et al. (2004)	Media (television and video games) contact time, frequency of watching violent scenes in media	The empathy scale for children, the Social Desirability Scale for Children, HAQ-C (verbal aggression, physical aggression, anger, hostility), aggressive behaviours in the past month and pro-social behaviours	597 elementary school 5th graders in 6 schools randomly selected from all the large-scale schools in Japan	Longitudinal design Two waves with a one-month interval	Results suggest that long exposure to television may enhance physical aggression, anger and aggressive behaviours. Similarly, time spent playing video games was also related to physical aggression and anger. The frequency of watching violent scenes was related to anger, for both television and video games, but particularly for video games.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Shikishima, Yamashita and Akabayashi (2012)	Parental report on household annual income, parental educational attainment, parental employment	Social skills measured by SDQ, Quality of Life measured by KINDL®	660 parents with children in elementary school and junior high school and the children (Japan Child Panel Survey 2011)	Cross-sectional design	Household income had significant negative relationships with children's social skills in terms of the emotional symptoms subscale and the peer relationship problems subscale. Household income had significant positive relationships with most subscales of the child's quality of life (except the family subscale with which the relationship is negative), even after parents' educational attainment, employment and age were controlled.

Maternal mental health

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Shikishima, Yamashita and Akabayashi (2012)	Parental mental health	Social skills (measured by SDQ), quality of life (measured by KINDL®)	660 parents with children (elementary school and junior high school) and their children (Japan Child Panel Survey 2011)	Cross-sectional design	Maternal mental health has a statistically significant relationship with most subscales of children's social skills (emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, total difficulties). Paternal mental health has a relationship with only hyperactivity/inattention. Parental mental health has little relationship with quality of life scores.
Ishii et al. (2011)	Types of maternal stress, parenting attitudes and support, child care use	Social development (life skills and interpersonal skills), language development (communication skills and understanding), motor development (fine and gross motor skills) assessed by childcare professionals	370 five-year-olds in child care centres (Evaluation of Child Night Care in Nursery project)	Cross-sectional design	Stress of mothers immediately after birth was significantly related to punishing the child and also the child's risk of maladjustment at child care. Maternal stress at the time of the survey was significantly related to the lack of interaction with the child, such as reading books, shopping and playing and also with the child's maladjustment at childcare centres.
Cheng et al. (2007)	Mother-child relationship	Behavioural problems assessed by the Child Behavior Checklist (CBCL)	85 mother-child dyads, at age 4 months and 10 months	Longitudinal design	Disturbed mother-infant relationships at 10 months old and maternal depression at 4 months old significantly increased the risk of high scores on the Child Behavior Checklist.
Sugawara et al. (2006)	Maternal life dissatisfaction	Behavioural problems at age 10: externalising problems measured by the Child Behavior Checklist (CBCL)	269 mother-child dyads (Kawasaki project)	Cross-sectional design	Multiple regression analysis shows that maternal life dissatisfaction is significantly associated with children's externalising problems.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Kikawada et al. (2006)	Maternal stress during pregnancy, after birth and at the time of the survey	Development (social development, language development and motor development), social adaptation and problem behaviours assessed by mothers childcare professionals	419 four-year-old children	Cross-sectional design	Children of mothers who were highly stressed after birth are more likely to be in a risk group in terms of gross motor development and adaptation to nursery cares compared to children whose mothers were not highly stressed. However, there is no difference between the two groups in other developmental arenas and problem behaviours. Mothers who were highly stressed during pregnancy and at the time of the survey do not differ from mothers who were not highly stressed in children's developmental outcomes.
Sugawara et al. (1999)	Maternal depression	Temperament measured by the Revised Infant Temperament Questionnaire (RITQ) at age 6 months and the Toddler Temperament Scale (TTS) at age 18 months	1329 women who attended an antenatal clinic: their children were assessed at the ages of 6 and 18 months, while mothers were assessed when children were 5 days and 12 months old (Kawasaki project)	Longitudinal design	Maternal depression in the early postpartum period may affect child early temperament. Of the five temperamental dimensions of the Japanese versions of the RITQ and TTS, "rhythmicity" and "attention span and persistence" showed reciprocal relationships with postnatal depression. Early maternal depression (5 days after delivery) correlated negatively with "frustration tolerance" in early infancy (6 months old) and late maternal depression (12 months old) was related positively to "fear of strangers and strange situations" in late infancy (18 months old).

Maternal employment

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Nozaki (2013)	Maternal employment when the child was between 0 and 3 years old	Academic achievement test scores, behaviour problems and pro-sociality rated by parents (measured by SDQ), children's quality of life (measured by KINDL®)	1 044 children (elementary school and junior high school) from the Japan Child Panel Survey 2011 and 2012	Longitudinal design using retrospective surveys	There was a significant negative correlation between maternal employment during the child's infancy and the child's academic achievement. However, this negative correlation diminishes as the grade levels advance and disappears at the junior high school level. Maternal employment during the child's infancy had no correlation with the child's behaviour problems, pro-sociality and quality of life.
Kan (2012)	Maternal employment when the child was in junior high school	Behavioural problems, academic achievement	23-40 years recalling their adolescence (Japanese Life Course Panel Survey: JLPS Waves 1 and 2)	Longitudinal design using retrospective surveys	Maternal full-time employment may prevent sons from smoking at school. Effects of maternal employment on children's educational attainment were not observed after controlling for family and school characteristics.
Ueno, Miyake and Katsurada (2009)	Maternal motivation to work, maternal job satisfaction, maternal childrearing style	Social skills: assessed by care professionals using "Child Social Development Test" by Toshobunka (5 sub scales including independence, altruism, cooperation, responsibility and perseverance)	56 nursery day care students with working mothers	Cross-sectional design	When children are grouped based on their mothers' motivation to work: 1) because of financial reasons and 2) because of maternal interest in working, the children of the mothers who selected 2) had statistically significantly higher scores in altruism and cooperation. There is significant correlation between mothers' job satisfactions and children's independence, altruism and perseverance. No significant correlation is found between mothers' childrearing styles and children's social skills.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Sugawara et al. (2006)	Maternal employment before age 3	Behavioural problems (externalising problems): - Emergence of Externalising Problem Behavior Checklist (EEPBCL) at the ages of 6 months, 18 months, 5 years - Child Behaviour Checklist (CBCL) at 8 and 10 years of age	1260 mother-child dyads: Children were assessed at the ages of 6 months, 18 months, 5 years,8 years and 10 years (Kawasaki project)	Longitudinal design	No relationship between maternal employment before age 3 years and children's behavioural problems was found. Children whose mothers had returned to work before they reached age 3 years reported significantly fewer externalising problems when they were 18 months and 5 years old. For ages 0 through 8, significantly fewer behavioural problems were reported for children with mothers who continued to work full-time after the child's birth without changing jobs due to childbirth, compared to children with mothers who resigned from work for pregnancy or childrearing and subsequently re-entered the workforce.
Hattori and Harada (1991)	Maternal employment	Cognitive and psycho-emotional development	All children born in 1980 in a city in Osaka: about 2 000 new-borns (Osaka report): assessed at the ages of 4 months, 7 months, 11 months, 18 months, 42 months and 6 to 7 years	Longitudinal design Chi-square test	There is no correlation found between maternal employment and the child's physical, cognitive and psycho-emotional development.

Classroom instruction

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Harada (2014)	Social skills training (5 sessions, 2 months)	Social Skills Scale (relationship initiation, decoding, self-assertiveness, emotional control, relationship maintenance and encoding), Self-Esteem Survey and Empathic-Affective Scale	320 high school 1st graders	Quasi-experimental design (without control group)	Among skills measured, decoding, self-assertiveness and emotional control of social skills increased statistically significantly after the training.
Horikawa and Shibayama (2014)	A psychological education programme based on the theory of cognitive behavioral therapy (6 sessions, 1 hour each)	Anxiety, self-esteem	27 elementary school 4th graders	Quasi-experimental design (without control group)	The programme was found to be effective in improving self-esteem and reducing anxiety generally, and the effect was maintained one and a half months later. The programme was particularly effective for those who had lower self-esteem or higher anxiety.
Ikejima and Fukui (2012)	Pair learning with a peer support programme during English lessons	Interpersonal adjustment (“friends’ support,” “pro-social skills” and “anti-bullying relationship”) measured by the Adaptation Scale for School Environments on Six Spheres (ASSESS)	35 junior high school 2nd graders	準実験的デザイン（統制群なし）	After the pair learning, the relationship among the students and their pro-social skills improved. However, there was a decline in “anti-bullying relationship” scores, which indicates potential effects of a large gap in academic skill levels between paired students.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Ando (2010)	2 types of psycho-educational programme "Successful Self 2"	Problem behaviours including bullying, self-control, the number of friends engaging in problem behaviours, self-efficacy to reject friends' temptation for problem behaviours, sociality, mood states (Profile of Mood States (POMS) Brief)	143 junior high school 2nd graders	Quasi-experimental design (without control group)	For both of the groups, "bullying," and "the number of bully friends," decreased and "serious attitudes towards school life," "smooth relationships with friends," "Vigor-Activity" increased after the intervention. For one group, "sociality" and "mood states" also increased.
Makino (2011)	Communication training programme	Communication skills, self-concept (self-esteem, self-efficacy)	6 junior high school students	Quasi-experimental design (without control group)	After the training, some stimulatory effects were observed on the participants' communication skills. However, there was no change in their self-esteem and self-efficacy.
Komatsu and Hida (2009)	2 types of group experience exercises, evaluation of classroom environment (supportive atmosphere, affirmative group environment, disciplinary environment, disturbing atmosphere)	Self-consciousness (self-affirmation, academic motivation, self-denial, social consideration, social alienation), self-rated social skills (basic skills for group participation, active relationship building skills, self-assertiveness)	85 elementary school 4th graders	Quasi-experimental design	There was no difference between the experiment group and control group in the change in self-consciousness. In the group who participated in exercise I, evaluation for classroom improved as well as self-evaluation of social skills. On the other hand, in the group who participated in exercise II and the control group, there was no significant improvement in evaluation of the classroom environment or self-evaluation of social skills. Those students whose "supportive atmosphere" of evaluation of classroom environment improved tended to have improved "basic skills for group participation" and "active relationship building skills" among self-rated social skills.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Ando (2008)	Psycho-educational programme "Successful Self"	Emotional and behavioural problems, bullying and being bullied, adjustment to school society, influence from friends engaging in problem behaviours, impulsivity/ aggressiveness, self-efficacy to reject friends' temptation for problem behaviours	51 elementary school 4th graders	Quasi-experimental design (without control group)	For both boys and girls, there were significant declines in "impulsivity/aggressiveness," "bullying," "physical bullying," "verbal bullying," "isolating someone," "being physically bullied," "being neglected," "being isolated," "going out at night," "depression," "crying, feeling like crying," "insomnia."
Watanabe and Harada (2007)	Social skill training	Social skills, self-esteem	29 high school 3rd graders	Quasi-experimental design	After the training, there was an increase in social skills of the treatment group. As for self-esteem, there were declines in average scores of both the treatment and control groups, but the decline for the treatment group was moderate compared to that for the control group.
Kawai et al. (2006)	A classroom-based training programme that encourages students to argue against someone else's self-defeating cognitions	Self-efficacy, self-esteem	120 elementary school 5th and 6th graders	Quasi-experimental design	The results indicated that, in comparison to the control group, the children in the experimental group showed a stronger general attitude of denying self-defeating cognition patterns, and had higher self-efficacy and self-esteem.
Ikejima et al. (2004)	Peer support programme implemented during Japanese lessons	Social skills ("consideration skill" and "relation skill")	32 elementary school 5th graders	Quasi-experimental design (without control group)	A significant increase was observed in both "consideration skill" and "relation skill" after the implementation of programme.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Emura and Okayasu (2003)	Group social skill education (8 sessions over a half year, during the period of integrated studies)	Social skills, subjective adjustment (stress response, school stressors, social support, sense of loneliness, truancy tendency)	133 junior high school 1st graders	Quasi-experimental design (without control group)	For those who had lower social skills before the intervention and improved their social skills after the intervention, “sense of loneliness” declined and “support from friends” increased. Meanwhile, for those who had moderate social skills before the intervention and whose social skills declined after the intervention, “bad temper / anger” increased.
Fujieda and Aikawa (2001)	“Classwide Social Skills Training” (CSST) 10 sessions, 45 minutes each	Self-evaluation of social skills (aggressiveness, pro-sociality, shyness), teacher evaluation of social skills (aggressiveness, pro-sociality, shyness), self-evaluation of 5 target skills	63 elementary school 4th graders in 2 classes	Quasi-experimental design	There was no effect of CSST in self-evaluation of social skills, when 10 students with the lowest social skills of each classroom were compared. Meanwhile, among the target skills, the control group improved their “good way of requesting” and “warm way of turning down” significantly compared to the control group. For teacher evaluation of social skills, effects were found for all the three factors. The results were similar when the whole classrooms were compared.

Extra-curricular activities

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Yamamoto, Araki and Kamino (2010)	Club participation	Sociality, willingness to engage in school events and academic learning	782 high school students	Cross-sectional design	There was a significant relationship between sociality and club participation. In addition, those participating in club activities were more willing to engage than the non-participating students in school events and academic learning.
Aoki (2005)	Participation in athletic club activities	Social skills, self-efficacy in athletic club activities, self-efficacy	2 709 high school students	Cross-sectional design	There were main effects of club affiliations, and the athletic club group affiliation had higher social skills scores than the non-affiliation group and the cultural club group. Men had higher social skill scores than women. Moreover, self-efficacy and school adjustment were correlated with social skills.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Udagawa and Shimoda (2013)	Perception of classroom climate	Assertion ("aggressive," "non-assertive," and "assertive")	152 elementary school 5th graders and 166 elementary school 6th graders	Cross-sectional design	For both boys and girls, "assertive" had a moderate positive correlation with classroom satisfaction and a weak negative correlation with classroom disunity. Therefore, it is indicated that when a student feels comfortable with the classroom atmosphere, their level of assertiveness also increases. There was no correlation between "aggressive" or "non-assertive" and classroom climate.
Takahashi, Kawashima and Yoshikawa (2010)	Classroom satisfaction (measured by Q-U)	Social skills	44 elementary school 4th graders	Longitudinal design	Students who had higher satisfaction with their classroom maintained high social skills and influence other students who have lower social skills as models.
Komatsu and Hida (2008)	Evaluation of classroom environment (supportive atmosphere, affirmative group environment, disciplinary environment, disturbing atmosphere)	Self-rated social skills (basic skills for group participation, active relationship building skills, self-assertiveness)	184 elementary school 3rd graders	Cross-sectional design	Those students who evaluated highly "supportive atmosphere" classroom environments tended to have higher self-evaluation in all the sub-scales of social skills. Those who evaluated highly "affirmative group environment" tend to have higher self-evaluation in "active relationship building skills" and "self-assertiveness," and those who evaluated highly "disciplinary environment" tend to have higher self-evaluation in "basic skills for group participation."

Experiencing volunteering activities

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Midzuno and Kato (2007)	Volunteering activities	Personality traits (social extroversion and dominance in Y-G personality tests), social skills (measured by Kikuchi's Scale of Social Skills (KiSS) - 18)	167 university students	Cross-sectional design	Those who had experience in volunteering activities had higher social extroversion, dominance and communication skills than those who did not want to engage in volunteering activities. However, those who wished to engage in volunteering activities also had higher social extroversion and communication skills than those who did not. Therefore, it is indicated that those who tend to have higher social extroversion and communication skills tend to engage in volunteering activities.
Baba, Shima and Oya (2006)	Volunteering activities in the "Special Summer Day Activities for Children with Disabilities"	Social skills (especially helping skills)	38 college students and general citizens who participated in the "Special Summer Day Activities for Children with Disabilities"	Quasi-experimental design (without control group)	Self-evaluation of social skills increased after the volunteering activities.

Outdoor adventure programmes

Authors	Context measures	Skills measures	Study population	Study design	Main findings
National Institution for Youth and Education (2010)	Experience in the community during childhood (experience in nature, contact with animals and plants, playing with friends, community activities, family events and helping with housework)	"Skills of experience" (self-esteem, sense of living together, motivation/interest, normative consciousness, interpersonal skills, work consciousness and manners/culture)	2 844 high school 2nd graders and 5 000 adults aged from 20 to 60 years old	Longitudinal design using retrospective surveys	Analysis of self-reports by adults and high school students about their childhood experiences indicates that "skills of experience" is related with "play with friends" and "contact with animals and plants" during the lower grades of elementary school and with "community activities," "family events" and "help with housework" during the upper grades through junior high school.
Araki, Okamura and Hamatani (2007)	Activities to encourage participants' reflection during a six-day adventure camp	Leadership, interpersonal skills, attitudes towards personal growth	14 college students	Quasi-experimental design Assessment was conducted before, after and two-months after the six-day adventure camp.	The treatment group's leadership score significantly increased two months after the camp compared to before the camp, while no change was observed among the control group.

Authors	Context measures	Skills measures	Study population	Study design	Main findings
Yasunami et al. (2006)	Programme types of a nature school (e.g. “outdoor cooking,” “arts and craft,” “recreational programme,” “free choice programme”)	Social and emotional development (measured by the Evaluation Scale of Nature-Experience Programs)	1126 elementary school 5th graders from 14 schools	Quasi-experimental design (without control group)	Participating students’ social and emotional development improved significantly immediately after the nature school, and was maintained after one month. In particular, students of those schools that included the programme "outdoor cooking" improved judgment and leadership significantly more than students of the schools that did not include the programme. Similarly, students of those schools that included "free choice programme" tended to improve interpersonal skills and sensibility to nature after the nature school and maintained them after one month. On the other hand, students in the schools that included "recreational programme" improved social and emotional development less than students in the schools that did not include the programme.
Nakagawa et al. (2005)	Lon-term camping lasting 15 days and short-term camping lasting 3 days	“Zest for Living” (measured by the IKR Inventory)	54 children, elementary school 4th graders to junior high school 3rd graders	Quasi-experimental design (without control group) Comparison between the long-term camping participants and the short-term camping participants of assessment of skills before, after and one month after each of the camping programmes.	For those who enrolled in the long-term camping, the subscales “judgment” and “concern with nature” significantly increased after the camping and were maintained one month after the camping. Those who enrolled in the short-term camping showed an increase in the subscale “cheerfulness” only immediately after the camping, and in “friendship and cooperation” only one month after the camping.
Ihara et al. (2004)	Adventure educational programme	General self-efficacy	17 children, elementary school 4th graders to junior high school 3rd graders	Quasi-experimental design (without control group)	General self-efficacy of the adventure educational programme's participants increased significantly one month after the programme compared to before the programme participation.