Technical Appendix

Definition

Interventions and approaches which focus on social and emotional learning (SEL) aim to improve pupils' interaction with others and self-management of emotions, as opposed to focusing directly on academic or cognitive skills and knowledge. SEL is sometimes characterised as a process for learning broader life skills, such as how to deal with oneself, others and relationships, and to be able to work in an effective manner.

SEL may focus on recognizing one's own emotions and learning how to manage those feelings. In dealing with others, SEL helps with developing sympathy and empathy, and maintaining positive relationships. SEL interventions might focus on the ways in which students work with (and alongside) their peers, teachers, family or community.

Three broad categories of interventions can be identified: 1. Universal programmes which seek to improve participation and engagement and generally take place in the classroom involving all pupils; 2. More specialised programmes which are targeted at students with either behavioural issues or behaviour and academic problems (see also Behaviour interventions); 3. School level approaches to developing a positive school ethos or improving discipline which also aim to support greater engagement in learning. Some programmes include aspects of Self-regulated learning and often include Collaborative learning approaches and techniques.

Search terms: Social and emotional learning, SEAL/SEL interventions; social skills, skills-for-life, self-esteem, empathy, emotional intelligence

Evidence Rating

There are seven meta-analyses of evaluations of interventions, mainly undertaken in schools using pupil attainment data to assess impact, with some exploration of causes of any identified heterogeneity. All were conducted in the last 10 years. However the quality of the underlying studies varies considerably and there are few well-controlled trials, particularly at scale. Despite this, the evidence is rated as extensive overall, because of the quantity and consistency of evidence at the meta-analytic level.

References

1 *Aos, S., Lieb, R., Mayfield, J., Miller, M., & Pennucci, A.*

Benefits and costs of prevention and early intervention programs for youth [↗]

(No. 04-07, p. 3901). Olympia, WA: Washington State Institute for Public Policy.

(2004)

2 *Bavarian, N., Lewis, K. M., DuBois, D. L., Acock, A., Vuchinich, S., Silverthorn, N., ... & Flay, B. R.*

Using Social,Emotional and Character Development to Improve Academic Outcomes: A Matched Pair, Cluster Randomized Controlled Trial in Low Income, Urban Schools [↗]

Journal of School Health, 83(11), 771-779

(2013)

3 *Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (Abstract ↓)*

The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions [↗]

Child Development, 82(1), 405-432

(2011)

4 *Humphrey, N., Lendrum, A., & Wigelsworth, M.*

Social and emotional aspects of learning (SEAL) programme in secondary schools: national evaluation [↗]

Research Report DFE-RR049 London: DfE

(2010)

5 *Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S. (Abstract ↓)*

A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes [↗]

Review of Educational Research, 86(3), 643-680

(2016)

6 *Manchester Institute of Education*

Promoting Alternative Thinking Strategies (PATHS) Evaluation report and Executive summary [↗]

EEF, London

(2015)

7 *Nix, R. L., Bierman, K. L., Domitrovich, C. E., & Gill, S.*

Promoting children's social-emotional skills in preschool can enhance academic and behavioral functioning in kindergarten: Findings from Head Start REDI [↗]

Early Education & Development, 24(7), 1000-1019

(2013)

8 *Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., & Pachan, M. (Abstract ↓)*

The positive impact of social and emotional learning for kindergarten to eighthgrade students. [↗]

Chicago, IL: Collaborative for Academic, Social, and Emotional Learning (CASEL)

(2008)

9 *Rimm-Kaufman, S. E., Larsen, R. A., Baroody, A. E., Curby, T. W., Ko, M., Thomas, J. B., & DeCoster, J.*

Efficacy of the responsive classroom approach results from a 3-year, longitudinal randomized controlled trial [↗]

American Educational Research Journal

(2014)

10 *Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A.*

Enhancing cognitive and social–emotional development through a simple-to-administer mindfulness-based school program for elementary school children: A randomized controlled trial [↗]

Developmental Psychology, 51(1), 52

(2015)

11 *Schonfeld, D. J., Adams, R. E., Fredstrom, B. K., Weissberg, R. P., Gilman, R., Voyce, C., ... & Speese-Linehan, D.*

Cluster-randomized trial demonstrating impact on academic achievement of elementary social-emotional learning [↗]

School Psychology Quarterly, 30(3), 406

(2015)

12 *Sklad, M., Diekstra, R., Ritter, M. D., Ben, J., & Gravesteijn, C. (Abstract ↓)*

Effectiveness of school- based universal social, emotional, and behavioral programs: Do they enhance students' development in the area of skill, behavior, and adjustment? [↗]

Psychology in the Schools, 49(9), 892- 909.

(2012)

13 *Valentine, J.C., DuBois, D. & Cooper, H.*

The Relation Between Self-Beliefs and Academic Achievement: A Meta-Analytic Review [↗]

Educational Psychologist, 39(2), 111-133

(2004)

14 *Washington State Institute for Public Policy (Abstract ↓)*

Benefit-Cost Results: Positive Action Public Health & Prevention: School-based [↗]

Olympia, WA: WISPP

(2016b)

15   *Washington State Institute for Public Policy (Abstract ↓)*

Benefit-Cost Results: Promoting Alternative Thinking Strategies (PATHS) Public Health & Prevention: School-based [↗]

Olympia, WA: WISPP

(2016a)

16   *Wigelsworth, M., Lendrum, A., Oldfield, J., Scott, A., ten Bokkel, I., Tate, K., & Emery, C. (Abstract ↓)*

The impact of trial stage, developer involvement and international transferability on universal social and emotional learning programme outcomes: A meta-analysis [↗]

Cambridge Journal of Education, 46(3), 347-376

(2016)

Summary of effects

Meta-analyses	Effect size	FSM effect size	
Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B., (2011)	0.27	-	
Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S., (2016)	0.17	-	
Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., & Pachan, M., (2008)	0.28	-	
Sklad, M., Diekstra, R., Ritter, M. D., Ben, J., & Gravesteijn, C., (2012)	0.46	-	
Washington State Institute for Public Policy, (2016b)	0.31	-	
Washington State Institute for Public Policy, (2016a)	0.13	-	
Wigelsworth, M., Lendrum, A., Oldfield, J., Scott, A., ten Bokkel, I., Tate, K., & Emery, C., (2016)	0.28	-	
Single Studies	**Effect size**	**FSM effect size**	
Manchester Institute of Education (2015)	-0.03	0.03	Maths
Nix, R. L., Bierman, K. L., Domitrovich, C. E., & Gill, S. (2013)	0.16	-	
Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A. (2015)	0.38	-	
Schonfeld, D. J., Adams, R. E., Fredstrom, B. K., Weissberg, R. P., Gilman, R., Voyce, C., ... & Speese-Linehan, D. (2015)	0.30	-	
Weighted mean effect size	**0.28**		

The right hand column provides detail on the specific outcome measures or, if in brackets, details of the intervention or control group.

Meta-analyses abstracts

3 *Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011)*

This article presents findings from a meta-analysis of 213 school-based, universal social and emotional learning (SEL) programs involving 270,034 kindergarten through high school students. Compared to controls, SEL participants demonstrated significantly improved social and emotional skills, attitudes, behaviour, and academic performance that reflected an 11-percentile-point gain in achievement. School teaching staff successfully conducted SEL programs. The use of 4 recommended practices for developing skills and the presence of implementation problems moderated program outcomes. The findings add to the growing empirical evidence regarding the positive impact of SEL programs. Policy makers, educators, and the public can contribute to healthy development of children by supporting the incorporation of evidence-based SEL programming into standard educational practice.

5 *Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S. (2016)*

This meta-analysis examined which classroom management strategies and programs enhanced students' academic, behavioral, social-emotional, and motivational outcomes in primary education. The analysis included 54 random and nonrandom controlled intervention studies published in the past decade (2003–2013). Results showed small but significant effects (average g = 0.22) on all outcomes, except for motivational outcomes. Programs were coded for the presence/absence of four categories of strategies: focusing on the teacher, on student behavior, on students' social-emotional development, and on teacher–student relationships. Focusing on the students' social-emotional development appeared to have the largest contribution to the interventions' effectiveness, in particular on the social-emotional outcomes. Moreover, we found a tentative result that students' academic outcomes benefitted from teacher-focused programs.

8 *Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., & Pachan, M. (2008)*

This report summarizes results from three large-scale reviews of research on the impact of social and emotional learning (SEL) programs on elementary and middle-school students — that is, programs that seek to promote various social and emotional skills. Collectively the three reviews included 317 studies and involved 324,303 children. SEL programs yielded multiple benefits in each review and were effective in both school and after-school settings and for students with and without behavioral and emotional problems. They were also effective across the K-8 grade range and for racially and ethnically diverse students from urban, rural, and suburban settings. SEL programs improved students' social-emotional skills, attitudes about self and others, connection to school, positive social behavior, and academic performance; they also reduced students' conduct problems and emotional distress. Comparing results from these reviews to findings obtained in reviews of interventions by other research teams suggests that SEL programs are among the most successful youthdevelopment programs offered to school-age youth. Furthermore, school staff (e.g., teachers, student support staff) carried out SEL programs effectively, indicating that they can be incorporated into routine educational practice. In addition, SEL programming improved students' academic performance by 11 to 17 percentile points.

12 *Sklad, M., Diekstra, R., Ritter, M. D., Ben, J., & Gravesteijn, C. (2012)*

To answer the question of whether teaching social and emotional skills to foster social–emotional development can help schools extend their role beyond the transfer of knowledge, the authors conducted a metaanalytical review of 75 recently published studies that reported the effects of universal, school-based social, emotional, and/or behavioral (SEB) programs. The analyzed interventions had a variety of intended outcomes, but the increase in social skills and decrease in antisocial behavior were most often reported. Although considerable differences in efficacy exist, the analysis demonstrated that overall beneficial effects on all seven major categories of outcomes occurred: social skills, antisocial behavior, substance abuse, positive self-image, academic achievement, mental health, and prosocial behavior. Generally, immediate effects were stronger than delayed effects, with the exception of substance abuse, which showed a sleeper effect. Limitations of the analysis and moderators of the effectiveness of SEB programs in schools are discussed in the final section of the article.

14 *Washington State Institute for Public Policy (2016b)*

Program Description: Positive Action is one example of a school-wide positive behavior program, aimed at improving social and emotional learning and school climate. Positive Action consists of a detailed curriculum of approximately 140 short lessons throughout the school year in K-6th grades and 82 lessons in 7th-8th grades. School climate components of the program reinforce the classroom curriculum and include training and professional development for teachers, resource coordination, and incentives for positive behavior. 5 studies ES 0.309 (SE 0.055).

15 *Washington State Institute for Public Policy (2016a)*

Program Description: The Promoting Alternative Thinking Strategies (PATHS) curriculum is a classroom socioemotional learning program designed to improve self-control, emotional understanding, interpersonal relationships, and social problem-solving skills for grades K-6. The program is designed to be a multi-year, school-wide intervention to prevent serious emotional and behavioral problems. The PATHS curriculum provides scripts to guide lessons that classroom teachers or counselors teach two to three times a week. 2 studies ES 0.13 (SE 0.13).

16 *Wigelsworth, M., Lendrum, A., Oldfield, J., Scott, A., ten Bokkel, I., Tate, K., & Emery, C. (2016)*

This study expands upon the extant prior meta-analytic literature by exploring previously theorised reasons for the failure of schoolbased, universal social and emotional learning (SEL) programmes to produce expected results. Eighty-nine studies reporting the effects of school-based, universal SEL programmes were examined for differential effects on the basis of: (1) stage of evaluation (efficacy or effectiveness); (2) involvement from the programme developer in the evaluation (led, involved, independent); and (3) whether the programme was implemented in its country of origin (home or away). A range of outcomes were assessed including: social-emotional competence, attitudes towards self, pro-social behaviour, conduct problems, emotional distress, academic achievement and emotional competence. Differential gains across all three factors were shown, although not always in the direction hypothesised. The findings from the current study demonstrate a revised and more complex relationship between identified factors and dictate major new directions for the field.