Transforming the Future of Learning with Educational Research

Helen Askell-Williams
Flinders University, Australia

A volume in the Advances in Educational Technologies and Instructional Design (AETID) Book Series
Chapter 13
Social–Emotional Learning and Students’ Transition from Kindergarten to Primary School in Italy

Valeria Cavioni
University of Pavia, Italy

Maria Assunta Zanetti
University of Pavia, Italy

ABSTRACT

The transition from kindergarten to primary school is a critical period in the development of children. Children who start primary school with good emotional and social skills have more friends, can easily establish new social relationships with peers and adults, and adjust better and achieve more at school. Although in the last couple of decades social-emotional learning programs have received considerable scientific attention in various countries, little is known about the implementation of such programs in the Italian context. This chapter describes a quasi-experimental study on the effectiveness of the implementation of a social-emotional program with Italian kindergarten children. Children’s assessment by the researcher and reports from teachers and parents indicated that the program called “By Your Hand” had a positive impact on the social and emotional competence of children over time as they moved from kindergarten to primary school, with indications of enhanced emotional competence and reduced behaviour problems.

INTRODUCTION

The recommendations of the European Parliament (European Parliament, 2006) on the key competences for lifelong learning, underline that schools need to contribute actively to the development of pupils’ personal and interpersonal skills in order to promote their education as active citizens in society. Within this perspective, the school fully meets its educational quest when the curriculum promotes both cognitive and socio-emotional development, emphasising the relationships among...
the various social actors involved, namely pupils, teachers and parents/carers.

Over the last few decades, various studies have been carried out on how schools may address this issue effectively by means of ‘social and emotional learning’ (SEL). The Collaborative for Academic, Social, and Emotional Learning (CASEL, 2012) defines SEL as the process of developing the ability to recognise and manage emotions, develop care and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively.

Various SEL initiatives have been organised across the world, including the USA (CASEL) Australia (KidsMatter) and the UK (SEAL). The Fundación Marcelino Botín Reports (2008, 2011, 2013) published various case studies from various countries in Europe and across the world on how different countries are addressing SEL in schools. Although these reports provide details concerning national social-emotional programs in several European countries such as England, Sweden, Holland, Spain and Germany, Italy has not yet been included in these studies and until now very little has been written on this subject in Italy.

The guidelines “Indicazioni nazionali per il curricolo della scuola dell’infanzia e del primo ciclo d’istruzione” (MIUR, 2012) issued by the Italian Ministry of Education state:

*At the end of the three-year course of kindergarten, it is reasonable to expect that every child has developed some basic skills that structure his/her personal growth: […] to recognise and express emotions, to be aware of his/her own and others’ desires and fears, to share experiences and games, […] to cope with conflicts and start to recognize behavioural rules (p. 23).*

The teaching of social-emotional learning in Italy, however, is not included in the national curriculum, and only recently has there been any interest in developing SEL programs in schools, focusing on emotional expression (Cavioni, Zanetti, & Renati, 2012; Grazzani Gavazzi, Ornaghi, & Antoniotti, 2011; Francescato, Putton, & Cudini, 1989; Francescato, Putton, De Gennaro, & Pirri, 1995); emotional competence (Ornaghi, Piralli, & Cherubin, 2013); emotional language development (Ornaghi, Brockmeier, & Grazzani, 2014; Ornaghi & Grazzani, 2013; Ornaghi, Grazzani, & Piralli, 2011); emotion regulation (Di Pietro, 2000); and empathy, prosocial behaviour and social skills (Bulgarelli, et al., 2013; Morganti, 2012).

The kindergarten period is characterised by developmental tasks that are based on SEL competencies, namely the ability to perceive, express and understand emotions (Carter, 2002), to use emotional coping strategies (Parker & Gottman, 1989) and to build positive social relationships with peers and adults (Denham, et al., 2012). When social and emotional development milestones are not negotiated successfully, kindergarten children may experience both short and long term problems (Denham & Burton, 1996). Behavioural problems at this early age tend to be consolidated, maintained and increased later on in childhood (Brotman, et al., 2005; Webster-Stratton, 1996; Webster-Stratton & Reid, 2004). On the other hand, research shows that kindergarten children with more developed SEL skills at school entry, are not only successful in early adjustment to school but achieve more than children without developmentally appropriate emotional and social competencies (Denham, 2006). Given these circumstances, it is imperative for children’s long-term mental health to foster social-emotional skills from early childhood.

Numerous studies have underlined the importance of school-based interventions specifically designed to promote children’s SEL from early childhood (Domitrovich, Cortes, & Greenberg, 2007; Zins, Bloodworth, Weissberg, & Walberg, 2004). Over the last decade, evidence-based interventions on the promotion of social-emotional learning in kindergarten have received increasing scientific interest (Nation, et al., 2003; Nelson, Westhues, & MacLeod, 2003; Payton, et al., 2008). Research shows that SEL programs ob-
Social-Emotional Learning and Students’ Transition from Kindergarten to Primary School in Italy

tained significant short and long term positive effects on targeted social-emotional competencies regarding oneself, others and school, including enhanced understanding and management of emotions, increased prosocial behaviour (Greenberg, Domitrovich, & Bumbarger, 2001), reduced behavioural problems, emotional distress and depressive symptoms (Wilson, Gottfredson, & Najaka, 2001), and improved academic performance and mental health (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Horowitz & Garber, 2007). A recent meta-analysis of over 200 studies found that children who attended SEL training programs compared to control groups, developed better social and emotional skills and attitudes and academic performance (Durlak J. A., Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Studies on the effectiveness of evidence-based SEL programs for kindergarten children showed that these programs significantly improved academic performance, created positive social attitudes and reduced behavioural problems and emotional distress (CASEL, 2012).

In view of the gap of knowledge related to SEL programs in the Italian educational context (Cavioni, Berrone, & Zanetti, 2013; Cavioni, Zanetti, & Renati, 2012; Fundación Marcelino Botín Reports, 2008; 2011; 2013), the aim of this chapter is to contribute to ongoing scholarship in school-based SEL programs in Italy. It describes the findings of a quasi-experimental study on the implementation of a SEL program called By your Hand with a cohort of 5-year-old preschool children in northern Italy.

GOALS OF THE STUDY

The present study examined the social-emotional functioning of young children over a two-year period during the transition period from kindergarten to primary school. The objective of the study was to evaluate the short and long term effects of a social and emotional program on children’s behaviour and social and emotional functioning as children moved from kindergarten to primary school. The study addressed three specific research questions, namely 1) Does the By Your Hand curriculum increase emotional competence in the short term (kindergarten) and in the long term (primary school)? 2) Does the curriculum reduce behavioural problems and emotional distress in the short term and long term? 3) Does the curriculum increase social competence and prosocial behaviour and general adaptation in the short and long term?

METHOD

Sample

The participants in the study were recruited from a kindergarten centre in Milan, in northern Italy. Random assignment into groups was not possible as the school principal identified the experimental and control classes at the beginning of the evaluation. Parental consent was obtained for all children participating in the study.

Ethics

The study was carried out in compliance with the regulations of the Italian Association of Psychology (AIP). Databases with personal information were password protected and statistical databases held non-identifiable data. Participant data were only shared within the research team.

Dependent Variables and Measures

The dependent variables in the study consisted of multiple sources of assessment, including the direct assessment of children by the researcher and parents’ and teachers’ ratings of children’s behaviours. The measures were administered at all time points in the study. Table 1 shows details of the instruments used in the study.
**Table 1. Overview of measures, outcomes and type of assessment instruments**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Outcomes</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC</td>
<td>External Component</td>
<td>Direct assessment by researcher</td>
</tr>
<tr>
<td></td>
<td>Mental Component</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reflective Component</td>
<td></td>
</tr>
<tr>
<td>SDQ</td>
<td>Emotional Symptoms</td>
<td>Parents’ report</td>
</tr>
<tr>
<td></td>
<td>Conduct Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyperactivity/Inattention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer Relationship Problems</td>
<td></td>
</tr>
<tr>
<td>SCBE</td>
<td>Social Competence</td>
<td>Teachers’ report</td>
</tr>
<tr>
<td></td>
<td>Internalising Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Externalising Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Adaptation</td>
<td></td>
</tr>
</tbody>
</table>

**Children: Test of Emotion Comprehension (TEC)**

The TEC (Pons & Harris, 2000; Italian version Albanese & Molina, 2008) is designed for children aged 3 to 11 years. It assesses nine components of emotional competence, namely: I. Recognition of emotions; II. Understanding the impact of external factors; III. Understanding the role of desires on emotions; IV. Understanding the role of beliefs on emotions; V. Understanding the role of memories on emotions; VI. Understanding the strategies of emotional regulation; VII. Hiding emotional expression; VIII. Understanding mixed/ambivalent emotions; IX. Understanding the role of morality. The nine TEC components are grouped into three main components, namely External, Mental and Reflective. The External component includes the sum of the scores from components I (emotion recognition), II (external causes) and V (memories); the Mental component includes components III (role of desires), IV (beliefs), and VII (hiding emotional expression); while the Reflective component is obtained by the sum of the components VI (regulation), VIII (mixed emotions) and IX (moral emotions). The test presents a series of stories with an emotional content, and the child is asked to identify and point to the facial expression related to the story. The reliability of the Italian version of the instrument was found by Albanese & Molina, (2008) to be KR-20 = .79 in total scores. In the study reported in this chapter the alphas of the three components (External, Mental and Reflective) ranged from .67 to .73.

**Parents: Strengths and Difficulties Questionnaire (SDQ)**

The Italian version (Tobia, Gabriele, & Marzocchi, 2011) of the SDQ (Goodman, 1997) was used to assess children’s mental health. The SDQ is a questionnaire completed by the parents and teachers of 4-16 year olds and by children aged 11 and over. It includes 25 items divided into 5 subscales with 5 items each, namely, 1) emotional symptoms; 2) conduct problems; 3) hyperactivity/inattention; 4) peer relationship problems; and 5) prosocial behaviour. For each item, the respondent is asked to mark ‘not true’, ‘somewhat true’ or ‘certainly true’. Scores in the first four scales indicate higher problems in emotional symptoms, conduct problems, hyperactivity/inat-
Social-Emotional Learning and Students' Transition from Kindergarten to Primary School in Italy

Attention and peer problems respectively. Greater scores in the prosocial behaviour subscale identify prosocial and altruistic behaviour towards peers and adults. In previous research with an Italian kindergarten children sample (Tobia, Gabriele, & Marzocchi, 2011), the internal consistency of the scales showed moderate to good values (α = .84 for Conduct Problems, α = .75 for Emotional Symptoms, α = .86 for Hyperactivity-Inattention, α = .68 for Peer Relationship Problems, α = .83 for Prosocial Behaviour). In our study the parent version was administered, with the coefficient alphas ranging from .58 and .65.


The SCBE Preschool Edition (LaFreniere & Dumais, 1996; Italian version Montirosso, et al., 2007) is a Likert rating scale, with responses ranging from never to always, with 80 items designed to assess patterns of emotional adjustment and social interaction with peers and with adults, in children aged from 30 to 78 months. The SCBE consists of eight basic scales and four summary scales that measure Social Competence, Internalising Problems, Externalising Problems and General Adaptation. Higher scores in Social Competence indicate a positive social functioning. Children with higher scores on the Internalising Problems scale are generally anxious and fearful, while higher scores in the Externalising Problems scale suggest behavioural problems associated with oppositional and aggressive behaviour. The General Adaptation scale is provided by the weighted sum of the scores of all 80 items. Children who obtain high scores on this scale are generally better adjusted than children with low scores (LaFreniere & Dumais, 1995). The Italian version of the SCBE (Montirosso, et al., 2007) displayed high internal consistency among Italian kindergarten children with α = .94 for Social Competence, α = .89 for Externalising Problems, α = .84 for Internalising Problems and α = .94 for General Adaptation. In our study the Cronbach alphas ranged from .71 to .86.

Procedure

The cohort of children in our study was tested in four waves over a two-year period. Children attending the last year of kindergarten were tested at pre-test and post-test (6 months after the pre-test); and then tested again during the first year of primary school at one-year (F1) and 18 months (F2) follow-ups from the pre-test respectively. The study followed the same group of children who participated in the pre and post-test (kindergarten) in the primary school at the first and second follow-up studies respectively. During this two-year period the children were attending the ‘Istituto Comprensivo’ (comprehensive school), which included both the kindergarten and primary school. Figure 1 shows the procedure timeline.

The teacher questionnaires were completed by 9 kindergarten teachers at the pre and post-test, and by 6 primary school teachers at the first and the second follow-ups respectively.

Overview of By Your Hand Program

By Your Hand is a SEL training program to develop young children’s social and emotional competence, drafted by the authors. It includes activities and materials for children aged 3 to 5 years, namely Timmy’s Trip Kindergarten Program, and Matteo’s Adventure School Program (6 to 10 years). The program was found to be successful in increasing social and emotional competence, decreasing behavioural problems, and strengthening social skills in kindergarten and school-aged children in a small pilot study carried out by the authors (Cavioni, Berrone, & Zanetti, 2013; Cavioni & Zanetti, 2013).

The implementation of By Your Hand consisted of 10 weekly sessions (1 hour/week) for the kindergarten children of the experimental group over
a 3-month period during kindergarten attendance time as shown in Table 2. The sessions initially focused on the recognition of emotional cues (facial expressions, posture, gestures, physiological arousal), the understanding of basic emotions (joy, sadness, fear and anger), and the enrichment of emotional vocabulary through the use of handouts, illustration cards and handcraft activities. Interactive games and role-plays were also used to develop new ways of emotional regulation and management of negative emotions. The last sessions strengthened social skills and prosocial behaviour by using stories, puppets, and video clips.

The overall aims of the program included helping children to recognise and manage emotions, to develop communication and cooperation skills, to build and maintain friendships, and to care for others. A series of additional activities called “home-work” and “school-work” were added to help the participants apply the social-emotional skills learned during the session across various social contexts. The children received worksheets to develop the specific skills with their parents at home (homework), while weekly tasks were also integrated into the mainstream curriculum (school-work). Each training session had a standard structure based on the “Quality Circle Time” methodology (Mosley, 2005). The researcher held six training sessions, and the remaining four sessions were carried out by the

Figure 1. The four waves of evaluation

Table 2. Themes and corresponding social and emotional skills addressed in the By Your Hand program

<table>
<thead>
<tr>
<th>Theme</th>
<th>Social-emotional learning skills addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timmy’s journey</td>
<td>Understanding happiness and sadness</td>
</tr>
<tr>
<td>The first night</td>
<td>Understanding fear</td>
</tr>
<tr>
<td>At school</td>
<td>Understanding the causes/consequences of emotions</td>
</tr>
<tr>
<td>Timmy learns to play</td>
<td>Self-regulation</td>
</tr>
<tr>
<td>A new schoolmate</td>
<td>Negative emotions management</td>
</tr>
<tr>
<td>I’m angry!</td>
<td>Anger management</td>
</tr>
<tr>
<td>The trip</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Birthday party</td>
<td>Empathy</td>
</tr>
<tr>
<td>I like you</td>
<td>Social skills</td>
</tr>
<tr>
<td>Magic touch</td>
<td>Prosocial behaviour</td>
</tr>
</tbody>
</table>
classroom teachers under the supervision of the researcher. Teachers in the experimental group attended a 6-hour course that included lectures on social-emotional development in early childhood and practical activities on behaviour management and social skills development. The teachers were encouraged to discuss any issues raised during their training and they also received materials and handouts on the program. Figure 2 displays the timeline structure of the 10 lessons for the children and the teachers’ training.

Statistical Analysis

Data were analysed using a mixed-design ANOVA with a within-subjects factor of time (pre-test, post-test; follow-up 1, follow-up 2) and a between-subject factor of group (experimental, control). Only significant main and interaction effects are reported in this study (p < .05). SPSS 18 was used to analyse the data.

RESULTS

A total of 82 children attending the final year of the kindergarten were assessed at pre-test. Of these, 44 children received the intervention program, while the children in the control group did not receive any intervention and were added to the waiting list. Figure 3 illustrates the flow of participants through each stage of the study.
The final sample was composed of 57 children in total (49.1% males, 50.9% females), mean age of 6 years 4 months at pre-test, with 31 children in the experimental group and 26 in the control group. At pre-test, there were no significant differences between the experimental and control group on any of the variables examined.

**Test of Emotion Comprehension (TEC)**

The analysis of the impact of the *By Your Hand* program in the External Component between pre-test and follow-up 2, showed that both the main effect, $F(1,55) = 5.78, p = .02, \eta^2_p = .095$, and the interaction effect, $F(1,55) = 4.2, p = .04, \eta^2_p = .071$, were significant. The results indicate a significant increase in the scores of the experimental group compared to the control group at follow-up 2 (Figure 4). A significant main effect, $F(1,55) = 27.52, p < .001, \eta^2_p = .334$, and a significant interaction effect, $F(1,55) = 4.46, p = .03, \eta^2_p = .075$ were found in the Mental Component when comparing the pre-test with post-test scores.

The experimental group showed higher scores compared to the control group (Figure 5). In the Reflective Component, differences between pre-test and follow-up 2 scores revealed a significant main effect, $F(1,55) = 5.35, p = .02, \eta^2_p = .09$, that showed a significant increase of mean scores of both groups, but the interaction effect was not significant.

**Strengths and Difficulties Questionnaire (SDQ)**

For the Emotional Symptoms scale, a significant main effect was found when comparing pre-test with post test scores, $F(1,55) = 4.18, p = .04, \eta^2_p = .079$. The Emotional Symptoms scores of the experimental group and the control group decreased. The analysis of the Conduct Problem scores revealed a significant main effect between post-test and follow-up 1 scores, whereby mean scores of both the experimental and control groups decreased, $F(1,55) = 5.73, p = .02, \eta^2_p = .105$. Furthermore, a significant interaction effect was found between the Conduct Problems scores.
between follow-up 1 and follow-up 2, \( F(1,55) = 4.5, p = .05, \eta^2_p = .008 \), whereby the control group scores significantly increased when compared with those of the experimental group (Figure 6). Peer Problems scores showed a significant main effect, \( F(1,55) = 15.31, p < .001, \eta^2_p = .218 \), between pre-test and follow-up 1 scores, whereby the scores of both the experimental and control groups decreased. Moreover, a significant interaction effect was found by comparing Peer Problems scores between follow-up 1 and follow-up 2, \( F(1,55) = 5.9, p = .02, \eta^2_p = .098 \), with control group scores significantly increased (Figure 7). No significant effects between the experimental and control groups were found in the Hyperactivity/Inattention and the Prosocial Behaviour scores.

**Social Competence and Behaviour Evaluation (SCBE)**

Results for the Social Competence scores revealed a significant main effect \( F(1,55) = 11.29, p = .001, \eta^2_p = .17 \), while a significant interaction effect was found between pre-test and follow-up 1 scores, \( F(1,55) = 8.2, p = .006, \eta^2_p = .13 \). Higher scores were reported for the experimental group compared to the control group (Figure 8). Analysis also showed a significant main effect, \( F(1,55) = 8.93, p = .004, \eta^2_p = .14 \), and a significant interaction effect \( F(1,55) = 6.39, p = .014, \eta^2_p = .104 \) between the pre-test and the follow-up 2 scores. Control group scores revealed a significant decrease at the end of the first year of primary school. Significant main effects were also observed between the post-test and follow-up 1, \( F(1,55) = 15.36, p < .001, \eta^2_p = .221 \), and the post-test and follow-up 2, \( F(1,55) = 15.22, p < .001, \eta^2_p = .219 \), whereby the control group and experimental group significantly decreased.

No significant effects were found for the Internalising Problems scores. In the Externalising Problem scores, there was evidence of a positive impact of the intervention from follow-up 1 to follow-up 2, with a significant interaction effect, \( F(1,55) = 6.39, p = .01, \eta^2_p = .104 \), indicating a significant decrease of the scores of the experimental group when compared to the control sample (Figure 9).
The analysis of the General Adaptation scores (Figure 10) between pre-test and follow-up 1 showed a significant main effect, $F(1,55) = 8.45, \ p = .005, \ \eta_p^2 = .133$ and a significant interaction effect, $F(1,55) = 10.8, \ p = .002, \ \eta_p^2 = .164$. While the scores of both the experimental group and the control group decreased, the control group showed a significant decrease when compared to the experimental group. In addition, a significant main effect, $F(1,55) = 9.05, \ p = .004, \ \eta_p^2 = .141$, and a significant interaction effect, $F(1,55) = 6.04, \ p = .017, \ \eta_p^2 = .099$, were found between
the pre-test and follow-up 2. The control group scores showed a significant decrease compared to the experimental group.

Table 3 provides a brief summary of the significant results in the study.

FIGURE 8. Social Competence (SCBE) raw scores

FIGURE 9. Externalising Problems (SCBE) raw scores

DISCUSSION AND CONCLUSION

This study examined the short and long-term effects of the “By My Hand” program on the social and emotional learning of kindergarten children during the transition from kindergarten to primary school, according to three main research questions.
Social-Emotional Learning and Students’ Transition from Kindergarten to Primary School in Italy

Figure 10. General Adaptation (SCBE) raw scores

Table 3. Summary of significant results

<table>
<thead>
<tr>
<th>Measures</th>
<th>Outcomes</th>
<th>Changes within Groups</th>
<th>Changes between Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC</td>
<td>External Component</td>
<td>Increase PRE Vs F1</td>
<td>Experimental group scores increase PRE Vs F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small effect</td>
<td>Small effect</td>
</tr>
<tr>
<td></td>
<td>Mental component</td>
<td>Increase PRE Vs POST</td>
<td>Experimental group scores increase PRE Vs POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large effect</td>
<td>Small effect</td>
</tr>
<tr>
<td></td>
<td>Reflective component</td>
<td>Increase PRE Vs F2</td>
<td>No effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small effect</td>
<td></td>
</tr>
<tr>
<td>SDQ</td>
<td>Emotional Symptoms</td>
<td>Decrease PRE Vs POST</td>
<td>No effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small effect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct Problems</td>
<td>Decrease POST Vs F2</td>
<td>Experimental group scores decrease F1 Vs F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium effect</td>
<td>Small effect</td>
</tr>
<tr>
<td></td>
<td>Peer problems</td>
<td>Decrease PRE Vs F1</td>
<td>Control group scores increase F1 Vs F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large effect</td>
<td>Small effect</td>
</tr>
<tr>
<td>SCBE</td>
<td>Social Competence</td>
<td>Decrease PRE VsF1</td>
<td>Control group scores decrease PRE Vs F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium effect</td>
<td>Medium effect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decrease PRE VsF2</td>
<td>Control group scores decrease PRE Vs F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium effect</td>
<td>Medium effect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decrease POST Vs F1</td>
<td>Control group scores decrease PRE Vs F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large effect</td>
<td>Medium effect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decrease POST Vs F2</td>
<td>Control group scores decrease PRE Vs F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large effect</td>
<td>Medium effect</td>
</tr>
<tr>
<td></td>
<td>Externalising Problems</td>
<td>No effect</td>
<td>Experimental group scores Decrease F1 Vs F2</td>
</tr>
<tr>
<td></td>
<td>General Adaptation</td>
<td>Decrease PRE Vs F1</td>
<td>Control group scores decrease PRE Vs F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large effect</td>
<td>Medium effect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decrease PRE Vs F2</td>
<td>Control group scores decrease PRE Vs F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium effect</td>
<td>Small effect</td>
</tr>
</tbody>
</table>
Question 1: Does the By Your Hand curriculum increase emotional competence in the short term (kindergarten) and in the long term (primary school)?

The results indicate that By Your Hand had a positive impact upon the emotional competence of the participants in the experimental group with regards to the External Component, namely in the recognition of emotional expression, the impact of external situations and memories of emotions. Increasing scores were observed from the beginning of the kindergarten to the first grade of primary school. Short-term effects were found in the Mental Component, with the experimental group showing improvements in the understanding of desires and beliefs related to emotions and in management of emotional expression. These findings suggest that the emotional learning training was effective in enhancing emotional competence both in the short term at post-test, as well as in the long term after one year from the intervention. Similar results were found in previous studies (Domitrovich, Cortes, & Greenberg, 2007; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) describing the positive effects of SEL programs on participants’ understanding of emotions. Young children who attended SEL programs in Durlak et al.’s and Domitrovich et al.’s studies showed higher accuracy in the recognition of the different situations that elicit basic emotions namely anger, fear, happiness and sadness.

Question 2: Does the curriculum reduce behavioural problems and emotional distress in the short term (kindergarten) and in the long term (primary school)?

Our findings suggest that By Your Hand reduced Conduct Problems (SDQ) and Externalising Problems (SCBE) in the experimental group, mainly at primary school level, while the corresponding scores of the control group increased in these domains. The Peer Problems scores (SDQ) were higher for the control group at the end of the kindergarten. Similarly, Schultz and colleagues (Schultz, Richardson, Barber, & Wilcox, 2011) found that children in their intervention group made significant improvements in the reduction of aggressive behaviour and conduct problems. In our study, no significant effects were found for emotional symptoms. This finding is consistent with previous intervention studies that found little evidence on the impact of universal SEL programs on emotional symptoms; more effective results were found with targeted programs for children with social, emotional and behavioural problems (Bierman & Welsh, 1997; Domitrovich, Cortes, & Greenberg, 2007).

Question 3: Does the curriculum increase social competence and prosocial behaviour and general adaptation in the short term (kindergarten) and in the long term (primary school)?

The control group scores for Social Competence (SCBE) and General Adaptation (SCBE) at primary school level were significantly lower than those of the experimental group, while the experimental group participants maintained their social and adaptation skills during the transition. No effects were noticed on Prosocial Behaviour (SDQ). These findings suggest that the program was effective in promoting social competence and general adjustment during the transition from kindergarten to primary school, while the children in the control group exhibited lower scores in these areas after 12 and 18-month from the pre-test respectively. Similar results were reported in previous studies, which found an increase in social skills and adjustment in kindergarten children who attended social and emotional learning programs (Denham & Burton, 1996; Izard, Trentacosta, King, & Mostow, 2004; Lynch, Geller, & Schmidt, 2004).

The findings of our study indicate that the kindergarten to primary school transition is a critical period in young children’s development: young children may experience adjustment problems unless they are prepared and supported for this transition. Previous studies have suggested that the kindergarten years are essential for building social-emotional skills and consequently prepare
young children for the challenges of formal education (Denham, 2006; Rimm-Kaufman, Pianta, & Cox, 2000; Webster-Stratton & Reid, 2004). Although there is clear evidence on the positive impact of SEL programs during the kindergarten years (Durlak & Weissberg, 2005), little is known on the benefits and advantages of a program of this kind during the transition from kindergarten to primary school. Our results underline young children’s need for SEL programs in the kindergarten in order to develop their social and emotional competences with the aim of improving their overall mental health and wellbeing, preventing the onset of problems, and facilitating their transition to primary school. These results may lead to further research to develop SEL policies and practices that facilitate the transition from kindergarten to primary school. Schools have tended to focus more on the cognitive development of young children in relation to school readiness, but our findings show that schools need to take a more balanced approach, addressing cognitive, social and emotional development in preparing young children for the challenges of formal education.

Our study has a number of limitations that need to be taken into consideration with regards to the generalisability of the results. The sampling process included a numerically limited convenience sample, with participants assigned to the experimental and control groups according to the pre-existing division of the classes. A further limitation concerns data collection in the transition stage between kindergarten and primary school during which a change in teachers occurred. Although the study included the results of questionnaires completed by the kindergarten teachers at the pre and post-test, the first and second follow-up questionnaires were completed by primary school teachers and therefore the rating process may have been influenced by the change in the teachers who completed the questionnaires at different points during the study. In view of previous studies describing the impact of SEL programs (Stefan & Miclea, 2010), the duration of the program (3 months) could represent another limitation since longer-term programs are more likely to be effective (Greenberg, et al., 2003). Although this was a longitudinal study spread over two years with results showing improvements in emotional competence, social competence and general adjustment at short and long term, further research needs to examine the effectiveness of the program over longer periods of time.

This study provides insight into the effectiveness of the implementation of SEL programs in school, particularly during the transition from kindergarten to primary school. The findings of the study may help to inform policy development and school practices in preparing young children for primary education, particularly in facilitating their transition from the kindergarten to the first year of formal education. The study may serve to increase the awareness of policy makers in Italy and abroad of the importance of social and emotional learning in education, especially during the kindergarten to primary school transition phase.

REFERENCES


Ministero dell’Istruzione, dell’Università e della Ricerca (MIUR). (2012). *Indicazioni nazionali per il curricolo delle scuole dell’infanzia e del primo ciclo di istruzione Ministero dell’Istruzione, dell’Università e della Ricerca*. Roma: MIUR.


**KEY TERMS AND DEFINITIONS**

**School Transition:** Process that occurs when children, families and schools need to adapt to facilitate the transition from kindergarten to primary school in order to support school adjustment and academic achievement.

**Social-Emotional Learning (SEL):** Process of developing the ability to recognize and manage emotions, develop care and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively.

**ENDNOTES**

1 In Italy kindergarten school includes children from 3 to 6 years old.


3 In this study all F-values reported were not corrected for violation of sphericity since all effects do not significantly violate the sphericity assumption, p > .05.