

**An evaluation of the impact of the  
Emotional Literacy Support Assistant  
(ELSA) project on pupils attending  
schools in Bridgend**

Research & Evaluation Unit  
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**Hampshire**  
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The Research & Evaluation Unit conducted this independent evaluation on behalf of the Local Authority. The original data are available should anyone wish to check, question or challenge the information reported. Any opinions expressed in this report are those of the authors and do not necessarily reflect either the views of Bridgend County Borough Council or Hampshire Educational Psychology Service.

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## Executive Summary

In recent years there has been a growing emphasis on the importance of emotional literacy as a key component of education, in addition to the academic curriculum. Consequently, a number of interventions have emerged designed to provide teachers and classroom assistants with training on the role of emotional literacy. The current study examined the impact of one such intervention, the Emotional Literacy Support Assistant (ELSA) programme, on primary and secondary aged pupils from schools in Bridgend. Pre and post measures of emotional literacy and behaviour were examined for i) pupils who had received ELSA (the intervention group) and ii) pupils who were yet to receive ELSA (the control group). The measures were completed by teachers and pupils, thus the study enabled both teacher and pupil perceptions to be examined before and after ELSA input.

Overall, the results of the teacher-rated measures were very positive and indicated significant improvements in most areas at follow-up. Crucially, these improvements tended to be (although were not exclusively) limited to those pupils who received ELSA. Table 1 provides a general summary of the results.

*Table 1.*

Summary of results found

Questionnaire		Significant improvement at follow-up?	
		Control group	Intervention group
<b>Strengths and Difficulties Questionnaire</b>	Emotional symptoms	NO	NO
	Conduct problems	NO	<b>YES</b>
	Hyperactivity	NO	<b>YES</b>
	Peer problems	<b>YES</b>	<b>YES</b>
	Pro-social behaviour	UNCLEAR	UNCLEAR
	Total score	NO	<b>YES</b>
<b>Teacher-rated emotional literacy</b>	Empathy	NO	<b>YES</b>
	Motivation	<b>YES</b> (primary only)	<b>YES</b> (primary only)
	Self-awareness	NO	<b>YES</b>
	Self-regulation	NO	<b>YES</b> (primary only)
	Social skills	NO	<b>YES</b>
	Total score	NO	<b>YES</b>
<b>Pupil-rated emotional literacy</b>	Total score	NO	NO

Teachers' perceptions of pupils receiving the ELSA intervention generally improved at follow-up, although in some cases this was only the case for primary pupils. However, this may be due to the relatively small sample size of secondary aged pupils who participated; collection of further data would help to clarify this issue. In contrast, teachers' perceptions of pupils who were in the control group were more stable and generally did not change at follow-up. Improvements were, however, found in relation to teachers' perceptions of pupils' relationships with peers, and their level of motivation. Although pupils in the control group did not receive ELSA during this period, it is likely that some support was put in place by schools for these children as part of their day-to-day work, and this may in part explain why these pupils' scores improved in these areas. The key point, however, is that pupils who received ELSA support showed significant improvements in more areas than those pupils who did not receive ELSA support.

In contrast to the findings of the teacher-rated measures, no significant changes were found on the pupil-rated Emotional Literacy questionnaire at follow-up, for either group. This finding was surprising given the positive improvements noted in teachers' perceptions. However, the sample size of pupil-completed measures was smaller than that of teacher-completed measures, and consequently the two sets of findings do not relate to exactly the same pupils. This issue aside, a similar pattern of results might nevertheless be expected across pupils and teachers. One possibility is that pupils were basing their responses on both the home and school context, whilst teachers were basing their responses solely on their observation of the school context. It may be that the impact of the intervention was most evident within school, and had not generalised to home life, hence the lack of change observed in pupils' perceptions. Additionally, teachers may have been more aware of the outcomes the ELSA intervention was designed to achieve and, as such, may have been more sensitive to any relevant changes. Linked to this, a further possible explanation is that pupils are more cautious than their teachers about acknowledging improvements in behaviour – or, perhaps, less aware of such improvements. In the absence of further data, such suggestions remain speculative; however, this offers an interesting avenue for future research.

Overall, the results of the evaluation indicate that the ELSA intervention had a successful impact on those pupils taking part, particularly from the perspective of their teachers. Such results are encouraging, and indicate that this approach offers a useful way of supporting pupils and enhancing their emotional literacy in school.

## 1. Background to the Emotional Literacy Support Assistant programme

The main emphasis within the English education system over recent years has been on raising academic attainments. This agenda was initially flagged over ten years ago with the introduction of the National Literacy and Numeracy Strategies (DfES, 1998a, 1998b). Teacher training has subsequently focused almost exclusively on delivering the national curriculum. Whilst the objective of raising standards is valid, some have argued that the means by which this has been addressed may have been ill conceived, serving to undermine pupil motivation (Sainsbury, 2003) and consequently limit the impact. Whilst in recent years policy has continued to be occupied with issues of curriculum structure (e.g. the Rose review, DfES, 2006a) there seems to have been a growing appreciation that standards cannot be raised solely through attention to the academic curriculum. Education is about children, and a more holistic perspective of pupil needs is required. In line with this, the concept of 'emotional literacy' has become more widely recognised in recent years. The focus of the current evaluation is on a particular intervention aimed at enhancing emotional literacy – the Emotional Literacy Support Assistant (ELSA) project.

### Why is emotional literacy important?

The importance of emotional literacy as an integral component of education is not a new concept but appears to be undergoing a resurgence of interest. Work on multiple intelligences (Gardner, 1983) broadened our understanding about the nature of human potential. Gardner argued that education had become dangerously obsessed with the notion of abstract intelligence; aspects he defined as linguistic (“word smart”) and logical-mathematical (“number/reasoning smart”) intelligence. In his multi-faceted model, Gardner drew attention to the importance of being intelligent about our own emotions (intra-personal intelligence – “self smart”) and the emotions of others (interpersonal intelligence – “people smart”). Moreover, he suggested that these emotional and social abilities tend to be more influential than conventional intelligence for personal, career and school success.

Gardner's (1983) interpersonal and intrapersonal dimensions are akin to the concept of emotional intelligence, first proposed by Salovey and Mayer (1990). Salovey and Mayer conceived of emotional intelligence as having five principle components:

1. Awareness of one's own emotions,
2. Ability to manage one's own emotions,
3. Sensitivity to the emotions of others,
4. Ability to respond to and negotiate with other people emotionally,
5. Ability to use one's own emotions to motivate oneself.

Hence, implicit in developing children's emotional literacy is the need to raise their awareness of emotions and the critical link between thoughts and feelings.

Goleman (1995) popularised the term *emotional intelligence* in his influential book of the same name. He defined emotional intelligence as the ability to recognise and understand one's own emotions and the emotions of others, to manage one's emotions, and to appropriately express emotions. He proposed that individuals with emotional intelligence exhibit the attributes of self-awareness, self-regulation, motivation, empathy and good social skills. Goleman suggested that emotional intelligence can be learned, improves with age and can ultimately matter more than IQ in determining career success. Cherniss (2000) provided some evidence to support the assertion about career success. In a longitudinal study of 450 boys in the USA he found that conventional IQ had little correlation with success in later life. In contrast, childhood abilities to handle frustration, control emotions and get along with other people were the more influential factors.

A study of Malaysian secondary school students (Liau, 2003) provided further understanding of this issue. Liau found that lower levels of emotional literacy were associated with higher levels of negative internalised behaviours (e.g. stress, depression, somatic complaints) and a higher level of inappropriate externalised behaviours (e.g. aggression, delinquency). He asserted the need to develop emotional literacy programmes to help young people manage situations in healthier and more appropriate ways.

In line with this, Kassem (2002) makes the case for teacher training to reflect awareness of the role of emotions in education, particularly given the current concerns about bullying, substance abuse and violence in schools. She argues that as the limbic system (which regulates emotional responses) is much quicker to react than the frontal lobes (which mediate information processing), it is essential for schools to maintain a positive classroom atmosphere. In a negative climate there is an increased risk of an aroused '*fight or flight*' response in students who are anxious, stressed or have inadequate coping strategies. However, most teachers and classroom assistants have little or no training about emotional literacy.

### **Curriculum approaches to emotional literacy**

Whole-school curricula designed to promote social and emotional thinking have received positive endorsement in the USA. Greenberg et al. (2003) conducted a review of a variety of classroom-based social and emotional programmes and found a number of key outcomes. The programmes led to improvements in interpersonal skills, quality of peer and adult relationships, and academic achievement, as well as reductions in behaviours such as substance abuse, high-risk sexual behaviour and aggression.

The Promoting Alternative Thinking Strategies – PATHS (Kusché & Greenberg, 1994) is one of the most researched sets of materials of this type. Greenberg et al. (1995) found that children who received the PATHS curriculum showed significant improvements in their emotional vocabulary, emotional understanding, tolerance, social skills and peer relations when compared with those in the control group. The Conduct Problems Prevention Research Group (1999) similarly found that students in intervention classrooms were less aggressive (according to their peers) and observers rated the classroom atmosphere as being more positive. This study also found that the quality of implementation significantly correlated with positive outcomes, hence highlighting the importance of facilitator competence in determining the effectiveness of the programme.

Kam, Greenberg and Walls (2003) provided further support for the importance of quality of implementation on the impact of the PATHS curriculum. Significant intervention effects were only found in schools where both headteacher support and implementation quality was high; however, neither of these factors alone predicted effectiveness. Kusché (2002) summarises three studies in which the PATHS curriculum was followed over the course of a year. As a result, children showed improvements in emotional understanding, self-control, ability to tolerate frustration, and use of effective conflict resolution strategies. Kam, Greenberg and Kusché (2004) looked at the long-term impact of PATHS. The results showed that over time ratings of externalising behaviour for the intervention group decreased, whereas those for the control group increased.

Evaluations of the PATHS curriculum in the UK are less common. However, those that do exist are equally positive. For example, Kelly et al. (2004) evaluated the introduction of PATHS within a class of 9-10 year olds within a Scottish primary school. The children's emotional understanding and problem solving skills were significantly better after experiencing PATHS.

Questionnaires revealed that staff recognised positive changes in pupils in relation to emotional vocabulary, empathy, managing emotions, and handling relationships. However, the results were limited due to a small sample size and the lack of a control group. In a much larger study involving nearly 300 children, Curtis and Norgate (2007) found a significant improvement on all five dimensions of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) for the intervention group but not the control. Teacher interviews also indicated that they perceived the programme to have helped children acquire a better understanding of emotions, and develop better empathy and self-control skills.

Whilst American studies tend to refer to ‘emotional intelligence’, ‘emotional literacy’ is the term more commonly used within the UK. The concept of emotional literacy has become better recognised in the UK over recent years, and there are a number of groups and organisations promoting interest in the subject (e.g. National Emotional Literacy Interest Group (NELIG); Antidote: The Campaign for Emotional Literacy in London). The government also appears to have recognised the importance of emotional literacy:

*“...emotional literacy is beginning to show encouraging outcomes and policy makers are taking these seriously....there is ample scope for promoting emotional literacy across the curriculum and through current developments in inclusion, citizenship, healthy standards and PSHE work”.*

(Ministerial speech at the Antidote Conference, 2002; cited in Weare & Gray, 2003).

In 2002, the Department for Education and Skills (DfES) commissioned a study into how a child’s emotional and social competence and well-being could most effectively be developed. The findings and recommendations of the study included the need to prioritise work on emotional and social well-being, the benefits of taking a holistic approach (which centred on a whole-school policy), and the importance of starting this work early and taking a developmental approach (Weare & Gray, 2003).

These recommendations were partially implemented through the introduction of Social & Emotional Aspects of Learning (SEAL) materials (akin to PATHS). SEAL is a curriculum resource for all primary-aged children that aims to develop social, emotional and behavioural skills through a structured whole-school framework. These were first introduced into primary schools as part of the behaviour and attendance strategy (DfES, 2005) and this approach was subsequently extended into the secondary sector (DfES, 2007). Their introduction recognises that effective learning is dependent upon a broader range of issues other than the academic curriculum alone. As the introduction to the secondary SEAL materials indicates, these materials aspired to provide:

*“a comprehensive approach to promoting the social and emotional skills that underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools”.*

(DfES, 2007, paragraph 1.2)

The introduction of the SEAL materials is an important milestone in the English education system. However, its impact is yet to be properly evaluated, although an evaluation of the small group aspect was completed in 2008 (Humphrey et al. 2008)<sup>1</sup>.

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<sup>1</sup><http://publications.dcsf.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-RR064&>

### **Targeted programmes**

Increasingly, local authorities within England are also developing initiatives aimed at supporting the emotional literacy of pupils in more targeted ways. The North & East Devon School Nurse Innovation Project (Buckland et al., 2005) developed and piloted ways in which school nurses could help to reduce the incidence of school exclusion in primary schools. They worked with whole classes to promote emotional literacy and offered targeted support to children who had either been excluded or were at risk of exclusion. They received training in Solution-Focused Brief Therapy, anger management, counselling and parenting skills. The project was positively perceived by staff, children and the parents interviewed in the evaluation study (Kelly et al., 2005). Key features identified as contributing to the success of the programme were that the school nurses were approachable, provided continuity of care, were perceived to be non-threatening, maintained client confidentiality, had local knowledge of the school and community, provided a link between home and school, and could act as a sign-post to other services. Teachers who thought that the school nurses had an overly high expectation of their ability to support the interventions, given competing pressures on time, however, expressed some reservations about the programme.

Carnwell and Baker (2007) reported the evaluation of a student assistance programme involving group work being conducted in primary and secondary schools. A key feature of the groups was the creation of a safe place to share feelings. Both staff and students referred to the development of trust and relationships, leading to changes in behaviour. Facilitators spoke of students developing social skills and becoming friendlier towards their peers. Challenges for staff in running the programme included coping with the group size, issues around obtaining an appropriate mixture of students and finding support for their role as facilitator. Some students who were challenging in class equally presented challenges in the group context. Some also found it difficult to relate to teachers as facilitators due to the role they normally played in the life of the students.

The research highlighted within this review suggests that programmes designed to enhance emotional literacy can, on the whole, have a positive impact on pupils. Consequently, programmes designed to nurture emotional literacy should constitute a valuable part of the school curriculum. One such programme has been established within Hampshire, the Emotional Literacy Support Assistant (ELSA) Programme. Internal evaluations of the project (e.g. Burton & Shotton, 2004; Burton, 2008; Burton, Traill & Norgate, 2009) indicate that this programme has a positive impact on those children who participate.

### **The ELSA programme**

Hampshire's ELSA programme was founded on work initiated in Southampton (further details of the Southampton strategy are provided in Weare & Gray, 2003, p.99). Southampton Educational Psychology Service originally appointed five peripatetic ELSAs whose role was to visit primary schools and deliver bespoke programmes of support to children who had been referred for various types of social and emotional needs. The support was well received by schools, many of which started to appoint their own Learning Support Assistants (LSAs) to work in a similar way with other children on roll. The peripatetic service consequently cascaded their skills to those being appointed and increasingly started to function in an advisory and supportive role.

The training for ELSAs is conducted in five one-day sessions, which are delivered two to three weeks apart over the course of a term (further details in Shotton & Burton, 2008). The programme includes psychological theory and practical guidance about working within a school

context. ELSAs are given a basic overview of what constitutes emotional literacy (Gardner, 1983; Goleman, 1995) and their attention is drawn to the fact that many children have a limited emotional vocabulary. Extending this vocabulary facilitates self-expression and reduces the need for children to exhibit problematic behaviours as a mode of expression. Children suggested for support typically need assistance in enhancing their sense of self-worth. Consequently the programme also includes:

- Maslow's hierarchy of need (Maslow, 1970). This highlights the need for safety, security and a sense of belonging as a foundation for building self-esteem and respect for others, which in turn contributes to the capacity for self-actualisation (to enjoy and achieve).
- Social learning theory (Bandura, 1977). This draws attention to the impact of social relationships on emotional development, and accentuates the notion that emotional literacy is modelled more than it is taught.
- Esteem Builders (Borba, 1989). This provides a broader understanding of what constitutes self-esteem. It also introduces security, selfhood and affiliation as the three main building blocks that allow a child to develop personal goals and a sense of competence.

Self-regulation is another aspect that prompts referral, and therefore the training includes a module on anger management (Sharp, Herrick & Faupel, 1998). This helps to build an understanding of how and why angry behaviour is initiated and suggests a range of calming strategies suitable to different contexts. Many children are referred to ELSAs for help in developing social skills. The training consequently includes a module on the purpose of social communication and its constituent skills (Hutchings, Comins & Offiler, 1991).

Since there is an increase in the number of children being identified with Autistic Spectrum Disorder (ASD) who are likely to require support to develop social skills, the programme also provides some support in understanding thinking patterns. Awareness of the triad of impairments (Wing & Gould, 1979) and theory of mind (Frith, 1989) are included in an introduction to autism, and trainees are introduced to the use of social stories (Gray & Garand, 1993) as a method of teaching children socially appropriate behaviours. Allied to social skills is the area of friendship; here, the programme looks at approaches for supporting young people in developing the skills they need to initiate and maintain friendships. One approach adopted is *Circles of Friends*, which was first developed in Canada (Pearpoint & Forest, 1992) and subsequently introduced to the UK (Newton, Taylor & Wilson, 1996) where it has become widely used in schools. Group work was also explored and support given in devising plans for friendship groups. Included within this module is an introduction to therapeutic story writing (Brett, 1986), a technique that allows children to consider challenging issues from a more objective perspective. By focusing initially outside of themselves, the children can be helped to generalise their learning to their own *hot* issues.

The training is followed by group supervision sessions, which are two hours long and are provided twice-termly by the educational psychologist for the schools involved. Supervision provides an opportunity for problem solving concerning casework, the sharing of ideas and resources, and further exploration of psychological approaches. The initial training is not considered exhaustive, and topics have subsequently been covered either during supervision (e.g. loss and bereavement) or in ELSA conferences (e.g. attachment).

The current evaluation examines the impact of the ELSA programme on children participating in Bridgend. It was anticipated that, as with the evaluations carried out within Hampshire, participating pupils' emotional literacy would increase following the ELSA input.

## 2. Method

### 2.1 Design

The dependent measures were:

- The child's level of emotional literacy (as perceived by the pupil and by their teacher)
- The child's strengths and difficulties in a range of areas (as perceived by their teacher)

A 3-way mixed design was used. All pupils who participated were identified by schools as being in need of ELSA support, but some received ELSA at the outset of the project (intervention group) and some were placed on a waiting list, to receive support once resources became available (control group). Some of the pupils were at primary school and some at secondary school. The measures relating to each child were completed at the start of the project, and again at the end. Thus, the two between-subjects variables were group type (intervention - ELSA support received; control - no ELSA support received) and school type (primary; secondary) and the within subjects variable was time (pre, post).

### 2.2 Measures used

Three measures were used:

- The teacher-rated version of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997)
- The Emotional Literacy checklist for teachers (Faupel, 2003)
- The Emotional Literacy checklist for pupils (Faupel, 2003)

The SDQ yields 5 sub-scales (emotional symptoms, conduct problems, hyperactivity, peer problems and pro-social behaviour). In general, a higher score indicates a higher degree of need; the exception being pro-social behaviour, where a lower score indicates a higher degree of need. The sub-scales for emotional symptoms, conduct problems, hyperactivity and peer problems can also be combined to provide a 'total score'.

The Emotional Literacy checklist for teachers also yields 5 sub-scales (empathy, motivation, self-awareness, self-regulation and social skills), and the sub-scales can be combined to provide a 'total score'. The Emotional Literacy checklist for pupils provides a total score of emotional literacy. In all cases, a higher score indicates a lower level of need.

### 2.2 Participants

Participants were drawn from a range of primary and secondary schools. Identifying children for ELSA support is a matter for the school. They tend to work with pupils who have a wide spectrum of emotional needs. Examples of the kind of difficulties for which ELSAs have offered support in the past include parental separation, bereavement, selective mutism, school refusal, frequent outbursts of anger, friendship difficulties, challenging behaviour and anxiety.

The number of questionnaires completed varied somewhat across the three measures. Table 2 provides a summary of the number of 'pre' forms completed, and the number of 'post' forms subsequently returned. As can be seen, a substantial number of 'pre' questionnaires were not followed up by a 'post' measure and this unfortunately reduced the amount of data available for analysis.

Table 2.

Summary of measures returned

	Pre data received ( <i>n</i> )	Useable matched post data received ( <i>n</i> )	
		Control group	Intervention group
<b>Teacher-rated SDQ</b>	199	68	30
<b>Teacher-rated Emotional Literacy</b>	198	66	30
<b>Pupil-rated Emotional Literacy</b>	178	67	24

Ultimately, far more follow-up data were provided for pupils taking part in the control group than for those actually receiving ELSA. A further difficulty was that initial independent t-tests revealed that the ‘pre’ scores of the two groups varied considerably on some aspects of the SDQ and the Emotional Literacy questionnaires. Specifically, pupils in the intervention group tended to have significantly greater needs than those in the control group. This is problematic as it makes it difficult to subsequently interpret any differences in progress across the two groups. Those pupils with less severe needs (in this case, the control group) will have less ‘room for improvement’ at follow-up; essentially, their scope for showing an improvement is capped at the outset. In terms of any statistical analysis, this could artificially inflate the findings for those pupils receiving ELSA, and render the use of a control group meaningless.

In order to overcome this issue, pupils from the control group were ‘matched’ with pupils from the intervention group based on their pre scores (the researcher was blind to the pupils’ post scores). This was achieved by removing the data belonging to those participants in the control group with less severe needs, and retaining the data belonging to those with more severe needs. Within this, the balance of primary and secondary pupils was maintained across the control and intervention groups. Participants were predominantly primary-aged, and male. Care was taken to ensure the control and intervention groups were roughly equal in terms of gender; however, due to the small sample sizes, and the fact that schools did not always specify the pupil’s gender, this was not always possible.

Independent t-tests subsequently confirmed that there were no differences between the two matched groups on any aspects of the SDQ or Emotional Literacy questionnaires. Thus, this approach resulted in equal sample sizes in the control and intervention groups (total  $n = 60$  for the teacher-rated measures; total  $n = 48$  for the pupil-rated measures). This approach meant that a substantial amount of the control group data was discarded; however, the findings are consequently more robust as it ensured that the control and intervention groups were comparable in terms of their needs prior to the ELSA intervention, and therefore had equal scope for improvement. In general, the pupil-rated measures related to the same pupils as the teacher-rated measures. However, there was inevitably some variation as a result of the different sample sizes. Thus, the three measures were not based on exactly the same groups of pupils.

### 2.3 Procedure

Following the initial training (as outlined in the background section), schools began ELSA support for identified pupils. It is recommended that ELSAs become involved with these children over at least half a term, generally offering weekly sessions, although the length and frequency of sessions depends upon individual circumstances. Many programmes continue for a longer period. It is, however, intended that the work be proactive and planned. Schools were asked to complete the evaluation measures immediately before and after the ELSA support was put in place.

### 3. Results

In some cases, one or two items were left incomplete on the questionnaires. Where this occurred, missing items were pro-rated with the modal score for that particular sub-scale.

#### 3.1 Teacher-rated SDQs

A series of 3-way mixed ANOVAs were carried out on each sub-scale of the SDQ, as well as total score. In each case, the between-subjects variables were school type (primary, secondary) and group type (intervention, control) and the within-subjects variable was time (pre, post). A main effect of time would indicate a statistical change in SDQ score at follow-up, whilst any interactions with time would indicate that this was dependent on whether pupils received ELSA (i.e. a time x group interaction) and/or the age of the pupils (i.e. a time x school type interaction).

#### Emotional symptoms

Table 3 provides a summary of mean scores for the emotional symptoms sub-scale. The ANOVA revealed that there were no main effects or interactions. Thus, scores on this sub-scale did not change significantly at follow-up, and this was the case regardless of whether pupils received ELSA, and whether they were at primary or secondary school.

Table 3.

Mean scores on the emotional symptoms sub-scale

		Pre (SD)	Post (SD)	Difference
Primary	Control ( <i>n</i> = 18)	4.28 (2.89)	4.28 (2.93)	0
	Intervention ( <i>n</i> = 18)	3.56 (3.33)	3.11 (3.12)	- 0.45
Secondary	Control ( <i>n</i> = 12)	4.25 (3.07)	4.42 (2.91)	+0.17
	Intervention ( <i>n</i> =12)	3.57 (2.98)	3.50 (2.20)	- 0.07
TOTAL	Control ( <i>n</i> =30)	4.28 (2.93)	4.33 (2.87)	+ 0.05
	Intervention ( <i>n</i> = 30)	3.57 (2.98)	3.27 (2.75)	- 0.30

#### Conduct problems

Table 4 provides a summary of the mean scores achieved on the conduct problems scale.

Table 4.

Mean scores on conduct problems sub-scale

		Pre (SD)	Post (SD)	Difference
Primary	Control ( <i>n</i> = 18)	3.56 (2.33)	3.44 (2.23)	- 0.12
	Intervention ( <i>n</i> = 18)	4.61 (3.22)	3.22 (2.65)	- 1.39
Secondary	Control ( <i>n</i> = 12)	3.75 (2.18)	3.67 (2.15)	- 0.08
	Intervention ( <i>n</i> =12)	3.92 (2.35)	2.92 (1.51)	- 1.00
TOTAL	Control ( <i>n</i> =30)	3.63 (2.24)	3.53 (2.16)	-0.10
	Intervention ( <i>n</i> = 30)	4.33 (2.88)	3.10 (2.23)	- 1.23

Overall, there was a main effect of time ( $F(1, 56) = 5.28, p < 0.025$ ), indicating a significant improvement in scores at follow-up. This was qualified by a trend for an interaction between time and group ( $F(1, 56) = 3.81, p = 0.06$ ). Analysis of the simple main effects revealed that there was a significant improvement in conduct scores for those pupils who received the ELSA

intervention ( $F(29) = 9.36, p < 0.005$ ) but not for those who were part of the control group ( $F(29) = 0.08, p > 0.05$ ).

### Hyperactivity

Overall, there was an improvement in hyperactivity scores at follow-up (see Table 5) and this was reflected in the main effect of time ( $F(1, 56) = 5.40, p < 0.025$ ). The anticipated interaction with group was not significant; however, planned contrasts revealed that there was in fact a significant reduction in hyperactivity for those pupils receiving the ELSA intervention ( $F(1, 29) = 4.97, p < 0.05$ ) but not for those pupils in the control group ( $F(1, 29) = 1.45, p > 0.05$ ).

Table 5.

Mean scores on the hyperactivity sub-scale

		Pre (SD)	Post (SD)	Difference
Primary	Control ( $n = 18$ )	6.94 (3.15)	6.67 (2.77)	-0.27
	Intervention ( $n = 18$ )	6.78 (3.34)	5.33 (3.11)	- 1.45
Secondary	Control ( $n = 12$ )	7.50 (1.62)	7.00 (2.26)	- 0.50
	Intervention ( $n=12$ )	6.67 (2.53)	6.25 (2.38)	- 0.42
TOTAL	Control ( $n=30$ )	7.17 (2.63)	6.80 (2.54)	- 0.37
	Intervention ( $n = 30$ )	6.73 (2.99)	5.70 (2.83)	- 1.03

### Peer problems

Overall, scores on the peer problems sub-scale improved at follow-up (see Table 6) and this improvement was statistically significant ( $F(1, 56) = 19.03, p < 0.001$ ). There was no significant interaction with group type, and planned contrasts confirmed that this improvement was significant regardless of whether pupils received the ELSA intervention (intervention group,  $F(1, 29) = 13.27, p < 0.001$ ; control group,  $F(1, 29) = 6.12, p < 0.025$ ). Moreover, there was no difference in amount of improvement made at follow-up by either group ( $t(58) = 0.73, p > 0.05$ ). Thus, improvements in peer problems were found for *all* pupils, irrespective of whether they received ELSA input.

Table 6.

Mean scores on the peer problems sub-scale

		Pre (SD)	Post (SD)	Difference
Primary	Control ( $n = 18$ )	4.44 (2.38)	3.56 (2.38)	-0.88
	Intervention ( $n = 18$ )	4.17 (2.48)	2.94 (2.04)	- 1.23
Secondary	Control ( $n = 12$ )	4.83 (2.21)	3.50 (2.75)	- 1.33
	Intervention ( $n=12$ )	4.83 (1.95)	2.92 (2.11)	-1.91
TOTAL	Control ( $n=30$ )	4.60 (2.28)	3.53 (2.49)	- 1.07
	Intervention ( $n = 30$ )	4.43 (2.27)	2.93 (2.03)	- 1.50

### Pro-social behaviour

Table 7 provides a summary of the mean scores for the pro-social behaviour scale. Overall, scores were higher for primary pupils than for secondary pupils ( $F(1, 56) = 4.46, p < 0.05$ ). Additionally, scores significantly improved at follow-up ( $F(1, 56) = 4.96, p < 0.05$ ). There was no interaction with group type so planned contrasts were carried out to examine the results for the control and intervention groups separately. Surprisingly, these revealed that the improvement observed was no longer significant for either group when looked at separately (control,  $F(1, 29) = 2.72, p = 0.11$ ; intervention,  $F(1, 29) = 2.12, p = 0.16$ ). Presumably, this is due to the relatively small sample sizes; collection of further data would help to clarify this finding.

Table 7.

Mean scores on the pro-social sub-scale

		Pre (SD)	Post (SD)	Difference
Primary	Control ( <i>n</i> = 18)	5.11 (2.56)	5.67 (2.72)	+0.56
	Intervention ( <i>n</i> = 18)	5.67 (2.40)	6.06 (2.86)	+ 0.39
Secondary	Control ( <i>n</i> = 12)	3.92 (2.23)	4.58 (2.47)	+0.66
	Intervention ( <i>n</i> =12)	3.83 (3.16)	4.83 (2.62)	+ 1.00
TOTAL	Control ( <i>n</i> =30)	4.63 (2.47)	5.23 (2.64)	+0.60
	Intervention ( <i>n</i> = 30)	4.93 (2.83)	5.57 (2.79)	+0.64

### Total score

Table 8 provides a summary of the mean total SDQ scores. Overall, total score improved at follow-up ( $F(1, 56) = 9.00, p < 0.005$ ). No other main effects or interactions were significant. However, planned contrasts revealed that the improvement in total score was only significant for those pupils in receipt of the ELSA intervention ( $F(1, 29) = 8.41, p < 0.01$ ) and not for those who took part in the control group ( $F(1, 29) = 1.91, p > 0.05$ ).

Table 8.

Mean SDQ total scores

		Pre (SD)	Post (SD)	Difference
Primary	Control ( <i>n</i> = 18)	19.22 (6.78)	17.94 (5.13)	-1.28
	Intervention ( <i>n</i> = 18)	19.11 (9.11)	14.61 (7.83)	- 4.50
Secondary	Control ( <i>n</i> = 12)	20.33 (5.96)	18.58 (7.46)	-1.75
	Intervention ( <i>n</i> =12)	19.00 (5.29)	15.58 (4.87)	- 3.42
TOTAL	Control ( <i>n</i> =30)	19.67 (6.38)	18.20 (6.05)	-1.47
	Intervention ( <i>n</i> = 30)	19.07 (7.70)	15.00 (6.72)	- 4.07

### 3.2 Teacher-rated emotional literacy scores

Teacher-rated emotional literacy scores were analysed in the same way as the SDQ scores. A 3-way mixed ANOVA was carried out on each sub-scale of the questionnaire, as well as total score. In each case, the within-subjects factor was time (pre, post) and the between subjects factors were group type (control, intervention) and school type (primary, secondary). Once again, a main effect of time would indicate a significant change in score at follow-up, whilst an interaction with group would indicate that the ELSA intervention mediated this change.

### Empathy

Table 9 provides a summary of the mean empathy scores. Empathy scores increased significantly at follow-up ( $F(1, 56) = 5.45, p < 0.025$ ) and planned contrasts revealed that this increase was significant for those pupils who received ELSA input ( $F(1, 29) = 5.01, p < 0.05$ ), but not for those in the control group ( $F(1, 29) = 2.54, p > 0.05$ ).

Table 9.

Mean teacher-rated empathy scores

		Pre (SD)	Post (SD)	Difference
Primary	Control ( $n = 19$ )	10.37 (2.75)	11.32 (2.45)	+ 0.95
	Intervention ( $n = 19$ )	9.47 (2.65)	10.42 (2.52)	+ 0.95
Secondary	Control ( $n = 11$ )	9.73 (2.24)	9.55 (2.58)	- 0.18
	Intervention ( $n = 11$ )	8.90 (3.86)	9.73 (3.69)	+ 0.83
TOTAL	Control ( $n = 30$ )	10.13 (2.45)	10.67 (2.60)	+ 0.54
	Intervention ( $n = 30$ )	9.27 (3.10)	10.17 (2.96)	+ 0.90

### Motivation

Table 10 provides a summary of the mean motivation scores. Overall, there was no change in motivation score at follow-up ( $F(1, 56) = 2.79, p > 0.05$ ). There was, however, an interaction between time and school type ( $F(1, 56) = 4.13, p < 0.05$ ). Analysis of the simple main effects revealed a significant increase in motivation scores at follow-up for primary-aged pupils, regardless of whether they had received ELSA ( $F(1, 37) = 9.15, p < 0.005$ ), but not for secondary-aged pupils ( $F(1, 21) = 0.06, p > 0.05$ ).

Table 10.

Mean teacher-rated motivation scores

		Pre (SD)	Post (SD)	Difference
Primary	Control ( $n = 19$ )	7.68 (3.20)	9.11 (1.79)	+ 1.43
	Intervention ( $n = 19$ )	8.89 (3.43)	10.26 (3.49)	+1.37
Secondary	Control ( $n = 11$ )	7.91 (3.30)	8.00 (2.57)	+0.09
	Intervention ( $n = 11$ )	8.73 (2.65)	8.36 (2.73)	- 0.37
TOTAL	Control ( $n = 30$ )	7.77 (3.18)	8.70 (2.14)	+ 0.93
	Intervention ( $n = 30$ )	8.83 (3.12)	9.57 (3.32)	+ 0.74

### Self-awareness

Table 11 provides a summary of the mean self-awareness scores. Overall, self-awareness scores increased at follow-up ( $F(1, 56) = 15.23, p < 0.001$ ). This finding was, however, qualified by an interaction between time and group type ( $F(1, 56) = 3.88, p = 0.05$ ). Analysis of the simple main effects revealed an increase at follow-up for those pupils who received the ELSA intervention ( $F(1, 29) = 20.19, p < 0.001$ ) but not for those pupils in the control group ( $F(1, 29) = 2.15, p > 0.05$ ).

Table 11.

Mean teacher-rated self-awareness scores

		Pre (SD)	Post (SD)	Difference
Primary	Control ( $n = 19$ )	8.79 (3.05)	9.53 (2.59)	+ 0.74
	Intervention ( $n = 19$ )	7.95 (2.37)	10.58 (2.65)	+2.63
Secondary	Control ( $n = 11$ )	9.09 (1.58)	9.82 (2.04)	+ 0.73
	Intervention ( $n = 11$ )	9.27 (1.79)	11.09 (1.81)	+ 1.82
TOTAL	Control ( $n = 30$ )	8.90 (2.58)	9.63 (2.37)	+ 0.73
	Intervention ( $n = 30$ )	8.43 (2.24)	10.77 (2.36)	+ 2.34

## Self-regulation

Table 12 provides a summary of the mean scores for the self-regulation scale.

Table 12.

Mean teacher-rated self-regulation scores

		Pre ( <i>SD</i> )	Post ( <i>SD</i> )	Difference
Primary	Control ( <i>n</i> = 19)	8.58 (3.01)	8.89 (2.51)	+0.31
	Intervention ( <i>n</i> = 19)	7.05 (3.58)	9.79 (3.29)	+2.74
Secondary	Control ( <i>n</i> = 11)	7.45 (2.07)	8.91 (3.02)	+1.46
	Intervention ( <i>n</i> = 11)	7.91 (2.74)	8.64 (3.32)	+ 0.73
TOTAL	Control ( <i>n</i> = 30)	8.17 (2.72)	8.90 (2.66)	+ 0.73
	Intervention ( <i>n</i> = 30)	7.37 (3.27)	9.37 (3.30)	+ 2.00

Overall, there was an increase in self-regulation scores at follow-up ( $F(1, 56) = 11.45, p < 0.001$ ). This was, however, qualified by a 3-way interaction between time, group and school ( $F(1, 56) = 4.14, p < 0.05$ ). Analysis of the simple main effects revealed an increase in self-regulation scores for primary-aged pupils receiving the ELSA intervention ( $F(1, 18) = 17.83, p < 0.001$ ). There was no change in scores for primary-aged pupils in the control group ( $F(1, 18) = 0.20, p > 0.05$ ), or for secondary pupils in either group ( $F(1, 20) = 3.38, p > 0.05$ ).

## Social skills

Table 13 provides a summary of the mean scores for the social skills scale. Overall, social skills improved at follow-up ( $F(1, 56) = 3.92, p = 0.05$ ). However, planned contrasts revealed that this was only the case for pupils who received ELSA ( $F(1, 29) = 5.37, p < 0.05$ ) and not for those in the control group ( $F(1, 29) = 0.67, p > 0.05$ ).

Table 13.

Mean teacher-rated social skills scores

		Pre ( <i>SD</i> )	Post ( <i>SD</i> )	Difference
Primary	Control ( <i>n</i> = 19)	10.89 (3.30)	11.21 (2.68)	+ 0.32
	Intervention ( <i>n</i> = 19)	11.16 (2.77)	12.42 (2.73)	+1.26
Secondary	Control ( <i>n</i> = 11)	11.36 (2.73)	11.91 (2.51)	+ 0.55
	Intervention ( <i>n</i> = 11)	10.73 (1.74)	11.36 (2.29)	+ 0.63
TOTAL	Control ( <i>n</i> = 30)	11.07 (3.06)	11.47 (2.60)	+ 0.40
	Intervention ( <i>n</i> = 30)	11.00 (2.42)	12.03 (2.59)	+1.03

## Total score

Table 14 provides a summary of the mean total scores on the Emotional Literacy questionnaire. Overall, total score increased at follow-up ( $F(1, 56) = 11.91, p < 0.001$ ). However, planned contrasts indicated that this increase was only significant for those pupils who received the ELSA intervention ( $F(1, 29) = 14.34, p < 0.001$ ) and not for those in the control group ( $F(1, 29) = 3.10, p > 0.05$ ).

Table 14.

Mean teacher-rated total emotional literacy scores

		Pre (SD)	Post (SD)	Difference
<b>Primary</b>	<b>Control</b> ( <i>n</i> = 19)	46.32 (11.50)	50.05 (8.12)	+3.73
	<b>Intervention</b> ( <i>n</i> = 19)	44.53 (12.19)	53.47 (11.78)	+ 8.94
<b>Secondary</b>	<b>Control</b> ( <i>n</i> = 11)	45.55 (7.49)	48.18 (9.85)	+ 2.63
	<b>Intervention</b> ( <i>n</i> = 11)	45.55 (9.13)	49.18 (9.17)	+ 3.63
<b>TOTAL</b>	<b>Control</b> ( <i>n</i> = 30)	46.03 (10.08)	49.37 (8.67)	+ 3.34
	<b>Intervention</b> ( <i>n</i> = 30)	44.90 (11.01)	51.90 (10.94)	+ 7.00

### 3.3 Pupil-rated emotional literacy

Finally, the results of the pupil-rated Emotional Literacy questionnaire were analysed. A 3-way ANOVA was carried out on total emotional literacy score, with time (pre, post) as a within-subjects factor and group (control, intervention) and school type (primary, secondary) as between-subjects factors. There were no significant main effects or interactions. As Table 15 indicates, with the exception of primary aged pupils who received ELSA, scores generally deteriorated at follow-up. A planned contrast indicated that this increase for primary pupils was not statistically significant. Thus, there was no significant impact on the pupil-rated Emotional Literacy scores, regardless of whether pupils received ELSA input.

Table 15.

Mean pupil-rated emotional literacy scores

		Pre (SD)	Post (SD)	Difference
<b>Primary</b>	<b>Control</b> ( <i>n</i> = 18)	72.94 (8.54)	72.72 (15.19)	- 0.22
	<b>Intervention</b> ( <i>n</i> = 18)	68.11 (15.41)	72.89 (12.34)	+ 4.78
<b>Secondary</b>	<b>Control</b> ( <i>n</i> = 6)	73.17 (15.01)	72.83 (12.54)	- 0.34
	<b>Intervention</b> ( <i>n</i> = 6)	70.83 (12.35)	69.33 (6.35)	- 1.50
<b>TOTAL</b>	<b>Control</b> ( <i>n</i> = 24)	73.00 (10.15)	72.75 (14.31)	- 0.25
	<b>Intervention</b> ( <i>n</i> = 24)	68.79 (14.49)	72.00 (11.13)	+3.21

## 4. Overall summary of results and discussion

Overall, the results were positive and indicated significant improvements in most areas at follow-up. Crucially, these improvements tended to be (although were not exclusively) limited to those pupils who received ELSA.. For ease of understanding, Table 16 provides a general summary of the results found.

Table 16.

General summary of results found

Questionnaire		Significant improvement at follow-up?	
		Control group	Intervention group
<b>SDQ</b>	Emotional symptoms	NO	NO
	Conduct problems	NO	<b>YES</b>
	Hyperactivity	NO	<b>YES</b>
	Peer problems	<b>YES</b>	<b>YES</b>
	Pro-social behaviour	UNCLEAR	UNCLEAR
	Total score	NO	<b>YES</b>
<b>Teacher-rated emotional literacy</b>	Empathy	NO	<b>YES</b>
	Motivation	<b>YES</b> (primary only)	<b>YES</b> (primary only)
	Self-awareness	NO	<b>YES</b>
	Self-regulation	NO	<b>YES</b> (primary only)
	Social skills	NO	<b>YES</b>
	Total score	NO	<b>YES</b>
<b>Pupil-rated emotional literacy</b>	Total score	NO	NO

Teachers' perceptions of pupils receiving the ELSA intervention generally improved at follow-up. The exception was their perception of pupils' emotional symptoms (as indexed by the SDQ), where scores remained stable at follow-up. Additionally, the finding in relation to pro-social behaviour was unclear as the initial ANOVA indicated that scores increased, but this finding disappeared when planned contrasts examined the results of the control and intervention groups individually. In all other areas, teacher-rated scores significantly improved at follow-up. In some cases (motivation and self-regulation), this was only the case for primary pupils. Some caution must be issued when interpreting these findings though as the sample size for secondary pupils was considerably smaller than that for primary pupils. Collection of further data would help to clarify this issue.

In contrast, teachers' perceptions of pupils who were in the control group were more stable. On the whole, these did not change at follow-up. Improvements were, however, found for the peer problems sub-scale of the SDQ and the motivation scale of the emotional literacy questionnaire, albeit for primary pupils only. The fact that teachers' perceptions improved on these two sub-scales, even in the absence of the ELSA intervention, is noteworthy. Pupils who formed the control group were identified as individuals who would benefit from ELSA intervention at some point. Moreover, they had the same level of needs (as identified by the SDQ and emotional

literacy questionnaire) at the outset of the project as those pupils who did receive the intervention. Thus, although these pupils did not receive ELSA during this period, it is likely that some support was put in place by schools to support these children as part of their day-to-day work. This may in part explain why these pupils' scores rose in these areas. The key point to note is that the scores of the control pupils rose in *some* areas, but the scores of the intervention pupils rose in *most* areas. Thus, pupils who received ELSA support showed improvements in more areas than those pupils who did not receive ELSA support.

In contrast, no significant changes were found on the pupil-rated Emotional Literacy questionnaire at follow-up, for either group. This finding was surprising, particularly given the positive improvements in teachers' perceptions. It must be noted that the sample size of pupil-completed measures was slightly smaller than that of the teacher-completed measures, thus the two sets of findings do not relate to exactly the same pupils. Nevertheless, a similar pattern of results might still be expected across pupils and teachers. One explanation could be that pupils were basing their responses on both the home and school context, whilst teachers were basing their responses solely on the school context. It may be that the impact of the intervention was most evident within school, and had not generalised to home life. Additionally, teachers may have been more aware of the outcomes the ELSA intervention was designed to achieve and, as such, may have been more sensitive to any relevant changes. An alternative explanation is that pupils are simply more cautious than their teachers about acknowledging improvements in their behaviour – or, perhaps, less aware of such improvements, even though they are evident to their teachers. One possibility is that pupils need a longer timeframe to become aware of, and acknowledge, these changes to their behaviour. In the absence of further data, such suggestions remain speculative; however, this offers an interesting area for future research to probe.

In summary, the results of the evaluation indicate that the ELSA intervention had a successful impact on those pupils taking part, at least from the perspective of their teachers. Such results are extremely promising, and provide further evidence for the role of the ELSA programme in supporting pupils and enhancing their emotional literacy in school.

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