Nesta/DCMS Centre for Social Action Innovation Fund Phase 2
Evaluation Report Summary Sheet

Grantee Name	Transforming Lives for Good (TLG)
Programme Name	Early Intervention Programme
Fund Name	Growing and Sustaining Fund
Stage of Development	Scaling
Evaluation Partner	University of York
Date Completed	December 2018
Budget	£19,000

Project Overview
The Early Intervention Programme (EI) was developed in-house by Transforming Lives for Good (TLG) and is designed to improve the behaviour of children who are struggling at school in order to raise attainment and reduce the risk of truancy and exclusion. Approximately one in 10 children, equating to three in every classroom in the UK, display psychological symptoms that reach diagnostic thresholds for clinical disorders. The Early Intervention programme equips volunteers to enter schools and provide one hour of one-to-one coaching support with a child each week. By building a relationship with that child through spending time with them and listening to them, a bond is formed between role model and child, letting them know that there is someone who cares. EI is a unique model that is easily replicable and sustainable over the long term. There are currently 140 signed partnerships, over a thousand trained EI coaches, with over 20,000 different coaching sessions taking place every year. The funding enabled TLG to scale the EI programme, including establishing 62 new centres, recruiting 421 new volunteers, working with 210 new children, increasing the programme's evidence base and moving towards long-term financial sustainability. This report provides an update to a previous evaluation of TLG's EI programme first reported in March 2016. TLG acted on recommendations made in the previous report and embedded two outcome measures that capture the views of parents, teachers and children into their online case management system. In the time that had passed between the two reports, a larger number of children had completed the programme enabling a more meaningful analysis of change over time than was possible in 2016.

Headline Findings

- Trends suggest that at the start of the programme, children participating in TLG's EI programme have a greater level of emotional and behavioural difficulties than would be expected for other children of a similar age. **By the end of the programme, both parents and teachers report substantial improvements in their Strengths and Difficulties Questionnaire (SDQ) scores.** A large majority of parents (79%) and teachers (80%) report that the children's difficulties are better at the end of the intervention. For a small number of cases parents (5%) and teachers (9%) felt that the children's problems had got worse and for the remainder had stayed the same.
- The consistency between teacher and parent reports suggest that behaviour is improving across multiple contexts – both in school and at home. The findings in relation to children's subjective wellbeing and happiness suggest a small but significant trend towards increased wellbeing at the end of the programme.

Evaluation Approach & Methodology

The purpose of the evaluation was to conduct an independent analysis of data from routinely administered outcome monitoring tools to explore change over time and potential impact; sufficient time had passed since the last evaluation in 2016 to allow for larger numbers of children to have completed the programme with data available at both the start and end of the programme. EI coaches also administer the measures at a mid-way point as a tool for coaches and TLG staff to monitor ongoing progress.

Two measures were selected to evaluate wellbeing and behaviour outcomes (the Strengths and Difficulties Questionnaire (SDQ) and the School Children's Happiness Inventory (SCHI)). These standardised measures are routinely administered at the start and end of the EI programme to monitor outcomes and progress. Parents and teachers complete the SDQ and children complete the SCHI. The Schoolchildren's Happiness Inventory was also selected as a potential resource for coaches to explore children's feelings and wellbeing in school.

Data was extracted from TLG's case management system in August 2018. Data was available in some form (i.e. at least one measure at one time point) for a total of 630 children.

■ Quantitative	□ Qualitative	□ Mixed
■ Impact Evaluation	□ Process Evaluation	□ Economic Evaluation
■ One-off evaluation	□ Developing internal evaluation capacity	

Evaluation Implementation Challenges and Limitations

- As would be expected for a school-based programme, there are higher levels of missing data for the parent reported SDQ. At the start of the intervention, there were 126 cases where the parent SDQ had not been completed and one case that was excluded due to high levels of item-level missing data (total 127 missing). At the end of the intervention there were 30 cases of missing data because the parent SDQ had not been completed.
- The SCHI data shows 197 cases were missing at the start of the intervention because

the SCHI had not been completed and a further 2 cases were excluded due to high levels of item-level missing data. At the end of the intervention there were 25 missing cases due to non-completion of the SCHI.

- There were two key methodological limitations that prevented the evaluators from attributing a causal relationship between EI and the positive improvements observed on both the SDQ and SCHI:
    - First of all, and perhaps most significant, is the absence of a comparison or control group with which to compare the results. Without comparison data, there is a possibility that these improvements are caused by some other factor or change in circumstance for the children in the sample.
    - There is also some missing data, and a strong possibility that these are cases where children have dropped out or are not engaging fully with the programme making compliance with the request to complete the measures difficult.

  The consequence of these limitations is that the data analysed does not present a full picture of the experience of children receiving EI and the analysis may therefore over-estimate the improvements in these key outcome areas.
- Finally, there is a potential for bias from parents and teachers who completed the SDQ – they are aware that the child they are rating has received an intervention and therefore will be anticipating some positive improvements.

Key Recommendations and Next Steps

- Recommendations from the evaluation focus on strengthening evaluation and monitoring processes and the continued use of the new outcome measures. There are fewer parent-completed measures compared to teacher- completed measures, though this is not surprising or unusual for a volunteer-led programme implemented in schools. However, it is important to build on progress in this area and continue attempts to capture parent reports.
- With regards to further evaluation there are two main recommendations:
    1. The first is to conduct a well-designed mixed-methods process evaluation to explore patterns of implementation (i.e. length of intervention, number of sessions, content delivered, fidelity levels etc) as well as barriers and facilitators of EI delivery and in-depth perspectives from the experience of children, parents, mentors and teachers.
    2. The second recommendation for evaluating EI would ideally include a subgroup analysis of a larger cohort of SDQ and SCHI data, and in the long- term a comparison group design study to explore programme impact more robustly.

TLG is currently planning an updated evaluation using a much larger cohort size enabled by an increase in completed data from more children finishing the programme.

EVALUATION OF THE TLG EARLY INTERVENTION PROGRAMME

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EXECUTIVE SUMMARY

In 2014 TLG engaged an independent research team at the University of York to assist them in the development of internal evaluation processes and capacity in relation to their Early Intervention Programme (EI). The Early Intervention Programme was developed in-house by TLG and is designed to improve the behaviour of children who are struggling at school in order to raise attainment and reduce the risk of truancy and exclusion. Following the successful completion of this project (referred to throughout the report as phase one), the partnership was renewed in order to further evaluate EI outcomes in 2018 (phase two).

Following consultation with the steering group set up for this project, a brief review of evidence from systematic and meta-analytic reviews of school-based mentoring and coaching programmes and piloting conducted in phase one, two measures were selected to evaluate wellbeing and behaviour outcomes (the Strengths and Difficulties Questionnaire and the School Children's Happiness Inventory). These standardised measures are routinely administered at the start and end of the EI to monitor outcomes and progress.

Trends suggest that at the start of the programme, EI children have a greater level of emotional and behavioural difficulties than would be expected for other children of a similar age. By the end of the programme, both parents and teachers report substantial improvements in SDQ scores. The consistency between teacher and parent reports suggest that behaviour is improving across multiple contexts – both in school and at home. The findings in relation to children's subjective wellbeing and happiness suggest a small but significant trend towards increased wellbeing at the end of the programme.

The direction of change over time observed in relation to SDQ and SCHI scores provide support for the EI theory of change and form a base from which to continue EI's journey from Level 1 to Level 2 of Nesta's Standards of Evidence. These findings are encouraging with regards to the impact of EI, but it is important to bear in mind that without a comparison or control group these analyses are not able to determine the cause of the improvements in outcome (i.e. these could be explained by EI coaching or some other factor or variable in the child's life).

Recommendations focus on strengthening evaluation and monitoring processes and continued use of the new outcome measures. The next steps for evaluating EI would ideally include a subgroup analysis of a larger cohort of SDQ and SCHI data, and in the long term a comparison-group design study to explore programme impact more robustly.

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FOREWORD BY TLG

TLG is a national charity which "helps to bring Hope and a Future to struggling children." That means getting alongside struggling children, providing practical support in and out of school, and connecting with home to bring hope and a future. Nationally, some of the latest statistics for struggling children show that:

- Children living in poverty are four times more likely to get a permanent exclusion from school
- Children with special educational needs (SEN) account for just over half of exclusions and are more than six times more likely to receive a permanent exclusion than children with no SEN
- More than two thirds of the current prison population were excluded from school
- 1.5 million children are entitled to free school meals in the UK

Our Early Intervention programme is at the heart of what we do: equipping volunteers to enter schools and provide one hour of one-to-one coaching support with a child each week. By building a relationship with that child through spending time with them and listening to them, a bond is formed between role model and child, letting them know that there is someone who cares.

Early Intervention is a unique model that is easily replicable and sustainable over the long term. Because there are such low barriers to entry, it can be set up absolutely anywhere within a very short space of time and brings huge cost savings due to its deployment of volunteers. There are currently 140 signed partnerships, over a thousand trained Early Intervention coaches, over 20,000 different coaching sessions taking place every year and on average, we are currently seeing a new partnership every week! The future is exciting as the programmes continues to grow rapidly across the UK and beyond with 14 partnerships now established in Portugal.

INTRODUCTION

This report provides an update to a previous evaluation of TLG's Early Intervention (EI) programme first reported in March 2016. This report represents the next step in an ongoing evaluation journey for EI. TLG acted on recommendations made in the previous report and embedded two outcome measures that capture the views of parents, teachers and children into their online case management system. In the time that has passed since the last report, a larger number of children have completed the programme and data is now available to enable a more meaningful analysis of change over time than was possible in 2016.

This report provides summary findings and brief overview detail on the measures but further information about the context for this analysis and the development work conducted in partnership between TLG and University of York is available in previous reports (2016 and an interim report provided in May 2018).

This report is structured into five sections:

Section one provides background to the project and outlines the collaboration between TLG and the University of York.

Section two provides summary information on EI outcome measures and their administration.

Section three presents the analysis of data from the EI outcome measures focusing on the profile of children commencing EI and change over time.

Section four provides a brief discussion of the main findings and strengths and limitations of the analyses.

Section five provides recommendations for further evaluation.

SECTION ONE: BACKGROUND

The Early Intervention (EI) Programme was developed in-house by TLG and is designed to improve the behaviour of children who are struggling at school in order to raise attainment and reduce the risk of truancy and exclusion. Behavioural coaches (trained volunteers) work with children on a one-to-one basis, one hour a week for a year.

The level of emotional and behavioural difficulties experienced by school children in the UK is a cause for concern[i]. Approximately one in 10 children, equating to three in every classroom, are displaying psychological symptoms that reach diagnostic thresholds for clinical disorders. A seminal study of time trends in children's mental health[ii] chronicled a downward trend in emotions and behaviour over a thirty year period, and follow-up studies suggest that emotional difficulties in particular continue to trouble increasingly more children[iii]. Emotional and behavioural difficulties are associated with educational and social disadvantages that will, for some children, persist into their adult years. These disadvantages include increased risk of disengaging from school or being excluded, not achieving academic potential[iv] and leaving education with no formal qualifications[v].

Efforts to improve outcomes for children are typically divided into the prevention, early intervention or treatment of problems. A number of evidence-based treatments have been developed to address the needs of 'high-need' children. Despite increasing knowledge about the most successful approaches for treating emotion and behaviour problems fewer than 25% of children receive them[vi]. Treatment approaches are typically expensive to implement and rely on highly-skilled and experienced professionals: factors limiting the ability to replicate them on a large scale[vii]. Furthermore, by the time the lucky few do gain access to those services many children's problems are so deeply entrenched that they are resistant to change[viii].

Thus there have been several calls and moves towards greater investment in the development, testing and wide-scale implementation of prevention and early intervention approaches for the improvement of children's outcomes (e.g. the Allen Report[ix] and the establishment of the new What Works Centres including the Early Intervention Foundation and Education Endowment Foundation).

In this broad context, and the more specific context of a planned expansion of EI to greater numbers of children and schools, the TLG team identified the need for a robust evaluation and monitoring framework and research to help build the evidence base for their coaching programme. A partnership was formed between TLG and researchers at the University of York and a programme of work established to meet the aforementioned needs; the first phase was implemented in 2014-2016 and the second phase in 2018.

The first phase of the project comprised the following activities:

1. A review of existing and routinely collected data within TLG

2. The development of a new evaluation and monitoring framework that could be implemented and sustained by TLG in the future without the need for external assistance
3. Independent analysis of the data emerging from the new outcome monitoring tools following one year of implementation
4. A retrospective study of casefiles held by TLG on children who have completed EI in order to unpack potential impact and distance travelled
5. An online survey to gather the views of coaches with regards to evaluation as well as the impact and implementation of EI

As a result of these activities, TLG selected and implemented outcome measures as standard practice for all children participating in EI and updated their case management system to support electronic data capture and scoring. Individual level data from these measures is used regularly by coaches and other programme staff to review progress and distance travelled for individual children. However, in the early stages of the project it became clear that the potential sample size for the independent analysis of outcome data (component 3) would be limited due to the rolling nature of recruitment to the programme, length of the intervention often exceeding one year and the comparatively short time-frame within which to gather data. The outputs from the first phase of the project provided solid evidence for Level 1 on Nesta's Standards of Evidence and a clear pathway for achieving Level 2 in the future. Greater detail on the aforementioned activities and findings can be found in the corresponding evaluation report available on Nesta's website (https://www.nesta.org.uk/feature/centre-social-action-our-evidence-base/tlg/). An interim report also documents TLG's progress in implementing the recommendations made by the University of York following phase one.

The purpose of the second phase of the project (2018) was to conduct an independent analysis of data from routinely administered outcome monitoring tools with a larger sample of EI participants to explore change over time and potential impact; sufficient time had passed to allow for larger numbers of children to have completed the programme with data available at both the start and end of the programme. This analysis would enable an assessment to made against Level of Nesta's Standards of Evidence (Level 2 requires evidence of positive impact on the programme's desired outcomes in accordance with an associated theory of change).

SECTION TWO: MEASURING OUTCOMES

The theory of change for EI is summarised in Figure 1. The programme is designed to impact directly and indirectly on the following outcomes:

- Improvements in **behaviour** at home and school
- Increased sense of happiness and **wellbeing**
- Improvements in school **engagement**
- **Achieving** expected progress in numeracy & literacy
- More positive **relationships** between family members

Improvements in these outcomes are hypothesised in the theory of change to positively impact on broader educational and life outcomes and reduce the risk of school exclusion.

In phase one of the project, TLG selected The Strengths and Difficulties Questionnaire and Child Hope Scale to measure behaviour and happiness/wellbeing. A third tool, the Schoolchildren's Happiness Index (SCHI) was also selected as a potential resource for coaches to explore children's feelings and wellbeing in school, but was not initially selected as a measure of impact. However, following the initial piloting phase and feedback from coaches, the Hope Scale was replaced with the SCHI. An overview of the two measures is provided below.

All of the measures are administered on paper at the start of the programme, at a mid-point and at the end of the programme. Parents and teachers complete the SDQ and children complete the SCHI. Responses are entered into an online case management system by coaches. The system is programmed to provide online scoring in order to support use of the outcome data in planning and monitoring at an individual case level. For the purposes of the current project, anonymised raw data was exported from the case management system and cleaned, scored and analysed in SPSS by the research team.

STRENGTHS AND DIFFICULTIES QUESTIONNAIRE

The Strengths and Difficulties Questionnaire[x] (also known as SDQ) is a short screening questionnaire for children aged four to 17 years that gives reliable information on children's mental health and wellbeing. There are different versions of the SDQ for different informants; TLG has implemented the Teacher SDQ and Parent/carer SDQ.

There are 25 questions related to wellbeing, some positive and others negative. Responses to these questions can be scored to provide a picture of a child's emotional difficulties, conduct problems, hyperactivity, peer relationship problems and pro-social behaviour as well as their overall emotional and behavioural difficulties. An impact supplement asks a small number of questions about chronicity, distress, social impairment, and burden to

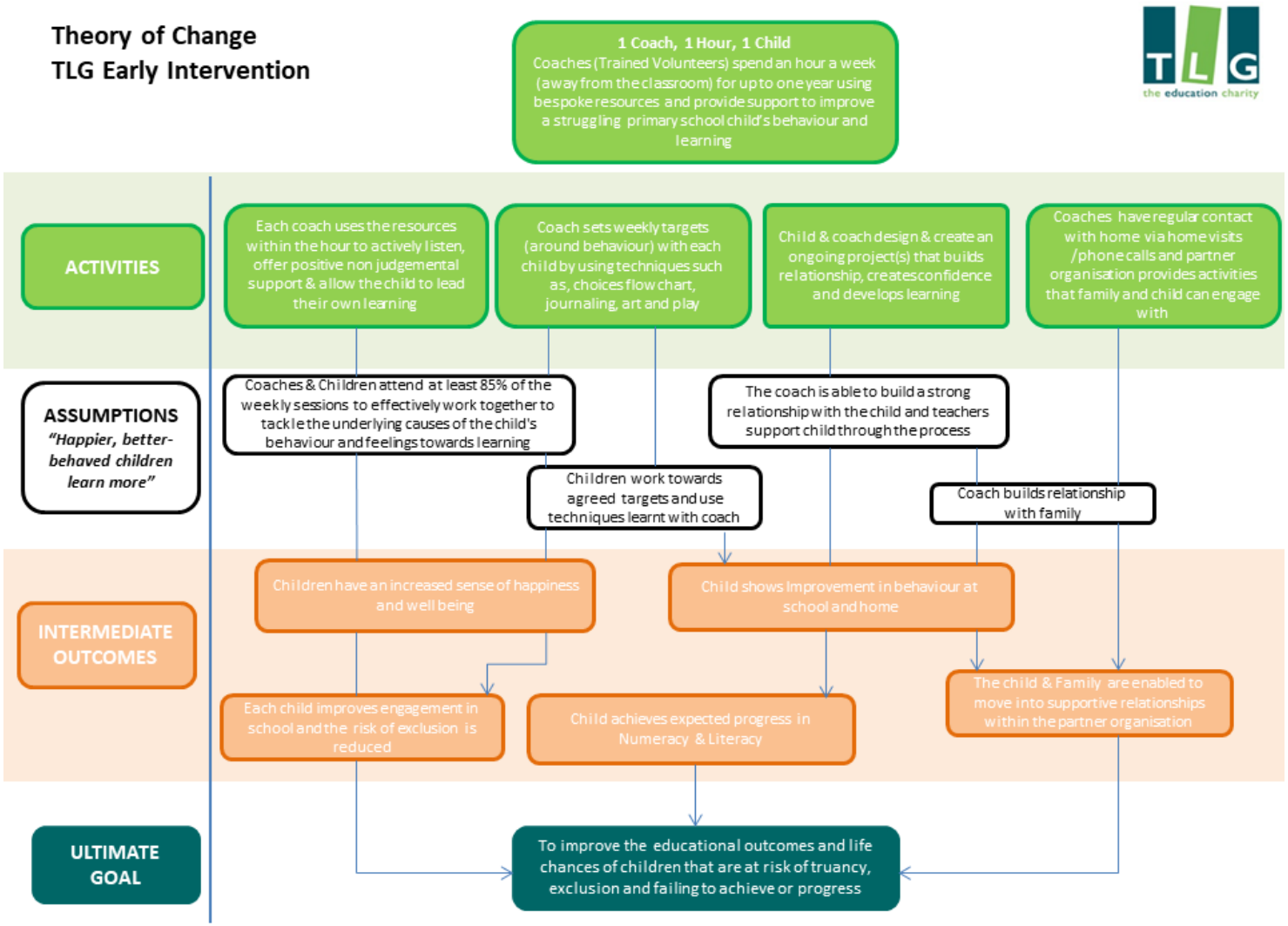
others (if a mental health problem exists). There are also follow-up questions that can be included after an intervention has been received: "Has the intervention reduced problems?" and "Has the intervention helped in other ways, for example by making the problems more bearable? “To increase the chance of detecting change, the follow-up versions of the SDQ ask about 'the last month', as opposed to 'the last six months or this school year', which is the reference period for the standard versions.

Responses on the SDQ can be computed to calculate an overall score (total difficulties) as well as subscale scores for conduct problems, emotional difficulties, peer problems, hyperactivity and pro-social behaviour. In all cases the higher the score the greater the level of difficulties, with the exception of the pro-social behaviour score for which higher scores indicate higher frequency of this positive behaviour. There are thresholds that can be applied to the scores to determine whether the child’s difficulties reach levels that would indicate they may be experiencing a clinically diagnosable disorder such as depression, anxiety, and conduct disorder. According to the measure developers, when there is item-level missing data (e.g. a response to a question is missing) scores for subscales can still be computed (by scaling up pro-rata) as long as responses for at least 3 items in the subscale have been given.

SCHOOL CHILDREN’S HAPPINESS INVENTORY

The School Children’s Happiness Inventory (SCHI) measures school-related subjective wellbeing (both negative and positive elements). The measure provides ratings of a child’s thoughts and feelings in relation to the past week at school. Items or questions ask children whether they agree with a range of positive and negative statements about their last week in school, for example ‘I had lots of energy’, ‘I felt sick’, ‘I wanted to cry’ and ‘I felt wide awake’. Although it is a child self-report measure, the SCHI comprises a card sorting exercise and requires an adult to be present to explain instructions to the child. It comprises 30 items answered on a four point scale ranging from agree a lot to disagree a lot. A total score is computed. The higher the score, the happier the child is deemed to be. For the purposes of the current analysis, item-level missing data was imputed using an overall average but only if 3 or fewer items were missing.

Figure 1


Theory of Change
TLG Early Intervention
1 Coach, 1 Hour, 1 Child
Coaches (Trained Volunteers) spend an hour a week (away from the classroom) for up to one year using bespoke resources and provide support to improve a struggling primary school child's behaviour and learning
TLG
the education charity
ACTIVITIES
Each coach uses the resources within the hour to actively listen, offer positive non judgemental support & allow the child to lead their own learning
Coach sets weekly targets (around behaviour) with each child by using techniques such as, choices flow chart, journaling, art and play
Child & coach design & create an ongoing project(s) that builds relationship, creates confidence and develops learning
Coaches have regular contact with home via home visits /phone calls and partner organisation provides activities that family and child can engage with
ASSUMPTIONS
"Happier, better-behaved children learn more"
Coaches & Children attend at least 85% of the weekly sessions to effectively work together to tackle the underlying causes of the child's behaviour and feelings towards learning
The coach is able to build a strong relationship with the child and teachers support child through the process
Children work towards agreed targets and use techniques learnt with coach
Coach builds relationship with family
INTERMEDIATE OUTCOMES
Children have an increased sense of happiness and well being
Child shows Improvement in behaviour at school and home
Each child improves engagement in school and the risk of exclusion is reduced
Child achieves expected progress in Numeracy & Literacy
The child & Family are enabled to move into supportive relationships within the partner organisation
ULTIMATE GOAL
To improve the educational outcomes and life chances of children that are at risk of truancy, exclusion and failing to achieve or progress

SECTION THREE: ANALYSIS OF OUTCOME DATA

This section provides information on the data available for analysis and reports findings in relation to the level of difficulties and subjective wellbeing experienced by children at the start of EI as reported by parents, teachers and children themselves. It also contains an analysis of change over time in those difficulties and wellbeing, specifically between the start and end of the EI intervention.

OBJECTIVES

The primary objectives of the independent analysis of outcome data are to:

- Profile the nature, level and impact of emotional and behavioural difficulties experienced by children who commence EI, as well as their levels of subjective wellbeing or happiness.
- To explore change over time in relation to these key outcomes and determine if that change is in the direction expected/stated in the theory of change for EI.

DATA AVAILABLE FOR ANALYSIS

The EI outcome measures are administered at the start and end of the intervention. Due to the length of the intervention, which is usually a full school year, EI coaches also administer the measures at a mid-way point as a tool for coaches and EI staff to monitor ongoing progress. This report only focuses on data from outcome measures administered at the start and end of the intervention (referred to as T1 and T3 henceforth).

Data was extracted from TLG's case management system (Coaching Village) in August 2018. Data was available in some form (i.e. at least one measure at one timepoint) for a total of 630 children. Of those children, 103 (16%) had completed the intervention at the time the data was extracted. The average length of time between the start and end of EI was 29 weeks, however there is a high level of variation with a standard deviation of 22 weeks. Although there is a process for 'closing' an EI coaching relationship, this is usually initiated when coaches (and co-ordinators) agree that the goals set out for children at the start of the intervention are met, which may explain the variation in length of intervention.

TABLE 1: SDQ DATA

Completed SDQs	T1 (n=630)	T3 (n=103)	Both T1 and T3 complete
Teacher report	587 (93%)	92 (89%)	92 (89%)
Parent report	503 (80%)	73 (71%)	73 (71%)

Table 1 shows the number of completed teacher and parent SDQs available at each timepoint. There are varying degrees of missing data across these measures at each timepoint. At T1 there are 40 cases where the teacher report SDQ has not been completed and a further 3 that were completed but excluded from the analysis because the amount of item-level missing data was so high as to prevent the implementation of standard strategies to compensate for it (see section two). At T3 there were 11 cases for which no teacher SDQ was available.

As would be expected for a school-based programme, there are higher levels of missing data for the parent report SDQ. At T1 there are 126 cases where the parent SDQ has not been completed and 1 case that was excluded due to high levels of item-level missing data (total 127 missing). At T3 there were 30 cases of missing data in all cases because the parent SDQ had not been completed.

TABLE 2: SCHI DATA

Completed SCHI	T1 (n=630)	T3 (n=103)	Both T1 and T3 complete
Child report	431 (68%)	78 (76%)	78 (76%)

SCHI data available for analysis is shown in Table 2. At T1 197 cases are missing because the SCHI has not been completed and a further 2 cases were excluded due to high levels of item-level missing data. At T3 there are 25 missing cases due to non-completion of the SCHI.

Data on the gender and age of the children in the sample is not available at this time.

All cases with data available at T1 have been analysed to understand the profile of children starting EI. Only cases where complete data for is available at both T1 and T3 have been included in the analysis of change over time (cases excluded pairwise not listwise).

PROFILE OF CHILDREN STARTING EI

An analysis of the SDQ scores reveals that the children in the sample are experiencing high levels of overall (total) difficulties in relation to their emotions, concentration, behaviour and ability to get on with other people, as reported by both teachers (M=16.8) and parents (M=17.7).

The subscales of the SDQ allow us to drill down into the nature and extent of these difficulties. Average scores at T1 on the subscales of the teacher report SDQ are presented in Table 3 and the parent report SDQ in Table 4. The picture emerging from these data suggests that, on average, the children in the sample experience much greater difficulties in key areas of development when compared to other children of a similar age in the general population of the UK. In some domains the scores of the TLG sample differ from the national

sample by more than a whole standard deviation, such as teacher rated total difficulties and hyperactivity and parent rated total difficulties and hyperactivity.

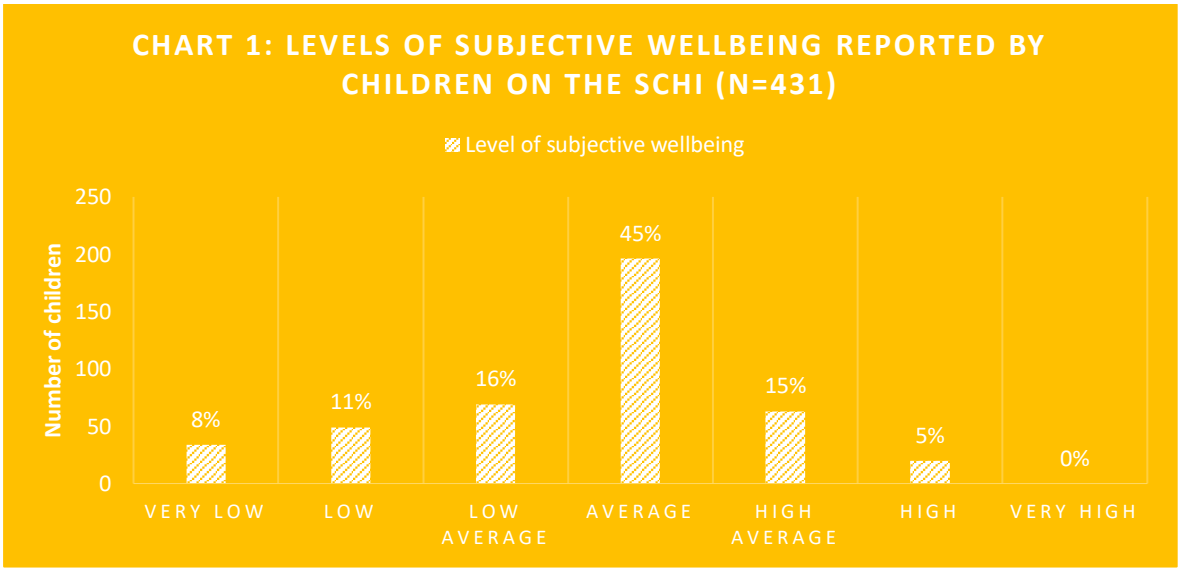
TABLE 3: TEACHER SDQ (N=587) AT T1 AND UK NORMS

Teacher report SDQ scale	Mean (SD)	UK Norm (5-10 year olds) Mean (SD)
Total score	16.8 (6.6)	6.7 (5.9)
Emotional difficulties	3.9 (2.7)	1.5 (1.9)
Conduct problems	3.5 (2.6)	0.9 (1.6)
Hyperactivity	6.2 (3.0)	3.0 (2.8)
Peer problems	3.2 (2.3)	1.4 (1.8)
Pro-social behaviour	5.9 (2.4)	7.3 (2.4)
Impact	2.7 (1.7)	0.4 (0.9)

TABLE 4: PARENT SDQ (N=503) AT T1 AND UK NORMS

Parent report SDQ scale	Mean (SD)	UK Norm (5-10 year olds) Mean (SD)
Total score	17.7 (7.0)	8.6 (5.7)
Emotional difficulties	4.3 (2.7)	1.9 (2.0)
Conduct problems	3.8 (2.4)	1.6 (1.7)
Hyperactivity	6.2 (2.8)	3.6 (2.7)
Peer problems	3.5 (2.3)	1.4 (1.7)
Pro-social behaviour	7.6 (2.0)	8.6 (1.6)
Impact	3.2 (2.7)	0.3 (1.1)

Children themselves are reporting varying levels of subjective wellbeing. The mean average score is 90.4 (SD 15.2). This score would suggest that the majority of children in the sample report levels of subjective wellbeing that are comparable to other children of a similar age (norm data available in Ivens, 2007). Chart 1 illustrates the number of children whose scores fall into different categories of wellbeing from very low to very high. There are a small but significant proportion of children reporting very low or low levels of wellbeing (19%) compared to 5% reporting high levels and 0% very high.



CHANGE OVER TIME RATED BY TEACHERS ON THE SDQ (N=92)

Teachers reported fewer difficulties on all SDQ subscales at the final timepoint than at the start of the intervention (see Table 5 for mean scores and standard deviations).

Paired-samples t-tests were used to determine whether there were statistically significant mean differences between scores on the teacher report SDQ at the start of the intervention and scores at the end of the intervention. The mean differences on all subscales were statistically significant suggesting that these changes are unlikely to have occurred by chance alone. The effect size provides a standardised metric for determining the size of the reduction in difficulties, in this instance the effect sizes range from small (0.2) for emotional difficulties to moderate (0.5) for total difficulties and their impact.

We can also detect movement in the number and proportion of children reaching different thresholds for severity on the SDQ over time. Table 6 provides the number and percentage of children whose scores on each subscale reach thresholds indicating that their strengths and difficulties are close to average, slightly raised (or lowered in the case of pro-social behaviour), high (or low), or very high (or very low) compared to what would be expected for children of a similar age and stage of development. Chart 2 visually plots the data for the total difficulties and impact subscale and highlights the trends observed across all the

subscales, e.g. an increase in the proportion of children experiencing close to average difficulties and the reduction in children experiencing very high levels.

TABLE 5: CHANGE OVER TIME IN TEACHER RATED SDQ

Teacher report SDQ scale	Time 1 Mean score (standard deviation)	Time 3 Mean score (standard deviation)	Mean difference	T test result	Effect size *p<0.05 **p<0.01
Total score	16.9 (6.4)	14.2 (6.6)	-2.7 (5.3)	t(91) = 4.912, p < .000	d = 0.5**
Emotional difficulties	3.4 (2.4)	2.8 (2.4)	-0.6 (2.5)	t(91) = 2.321, p = .023	d = 0.2*
Conduct problems	3.7 (2.6)	3.1 (2.7)	-0.6 (2.3)	t(91) = 2.564, p = .012	d = 0.3*
Hyperactivity	6.4 (2.7)	5.6 (2.8)	-0.8 (2.2)	t(91) = 3.328, p = .001	d = 0.4*
Peer problems	3.4 (2.3)	2.7 (2.1)	-0.8 (1.8)	t(91) = 4.035, p < .000	d = 0.4**
Pro-social behaviour	6.1 (2.6)	6.7 (2.7)	0.6 (2.3)	t(91) = -2.567, p = .012	d = 0.3*
Impact	2.6 (1.7)	1.7 (1.8)	-0.9 (1.9)	t(84) = 4.174, p < .000	d = 0.5**

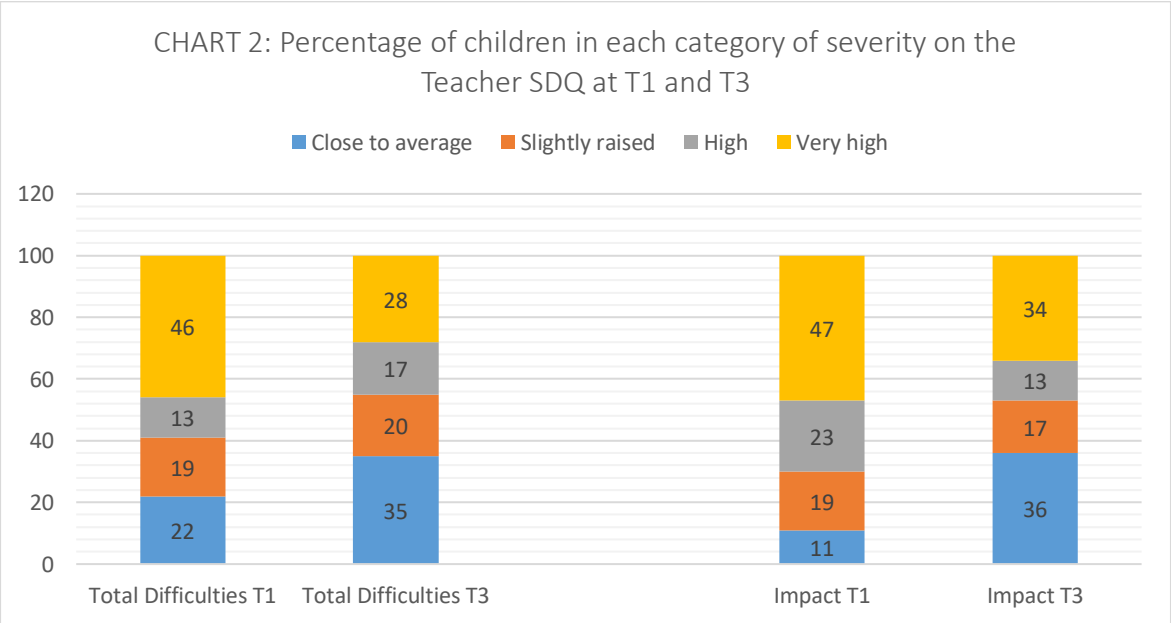


TABLE 6: CHANGE OVER TIME IN SDQ THRESHOLDS

Teacher report SDQ subscale	Close to average	Slightly raised/ slightly lowered	High/low	Very high/ Very low
Total difficulties T1	20 (22%)	17 (19%)	12 (13%)	43 (46%)
Total difficulties T3	32 (35%)	18 (20%)	16 (17%)	26 (28%)
Emotional difficulties T1	53 (58%)	12 (13%)	10 (11%)	17 (18%)
Emotional difficulties T3	64 (70%)	7 (8%)	6 (6%)	15 (16%)
Conduct problems T1	31 (34%)	10 (11%)	19 (20%)	32 (35%)
Conduct problems T3	46 (50%)	12 (13%)	8 (9%)	26 (28%)
Hyperactivity T1	37 (40%)	20 (22%)	11 (12%)	24 (26%)
Hyperactivity T3	46 (50%)	21 (23%)	7 (8%)	18 (19%)
Peer problems T1	39 (42%)	23 (25%)	12 (13%)	18 (20%)
Peer problems T3	44 (48%)	24 (26%)	16 (17%)	8 (9%)
Pro-social behaviour T1	56 (61%)	11 (12%)	9 (10%)	16 (17%)
Pro-social behaviour T3	58 (63%)	15 (16%)	11 (12%)	8 (9%)
Impact T1	9 (11%)	16 (19%)	20 (23%)	41 (47%)
Impact T3	33 (36%)	15 (17%)	12 (13%)	31 (34%)

CHANGE OVER TIME RATED BY PARENTS ON THE SDQ (N=73)

Parent reports of strengths and difficulties are consistent with those of teachers; parents reported fewer difficulties on all SDQ subscales at the end of the intervention than at the start (see Table 7 for mean scores and standard deviations).

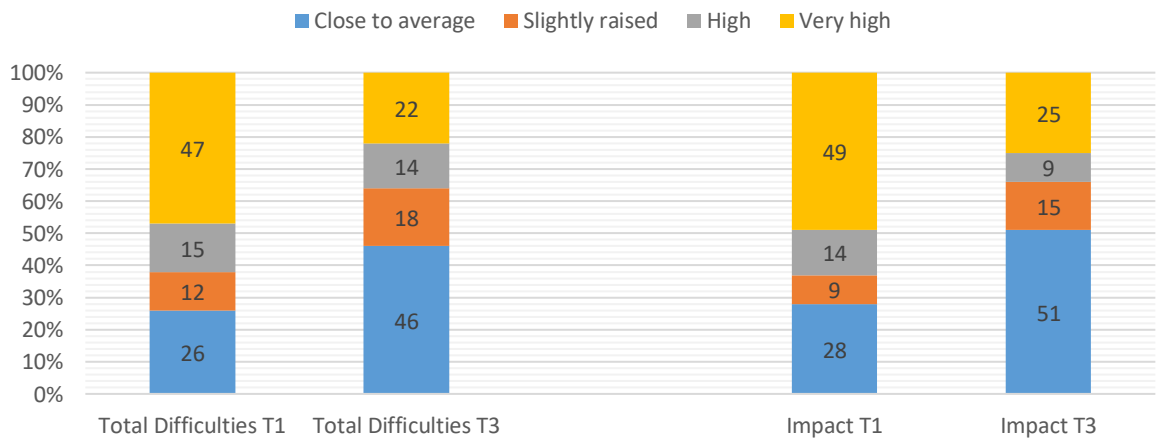
Paired-samples t-tests were used to determine whether there were statistically significant differences between mean scores on the parent report SDQ over the two timepoints. The mean differences on all subscales were statistically significant. However, in contrast to teacher reports, parents are reporting much larger reductions in difficulties, with effect sizes ranging from small (0.3) for emotional difficulties and pro-social behaviour, to medium

effects on conduct problems (0.5), peer problems (0.5) and total difficulties (0.7) to large effects on hyperactivity (0.8). There are higher levels of missing data for parent report SDQ and it is possible that these larger effect sizes reflect a selection bias in the data, e.g. parents who perceive more positive changes in their child's emotions and behaviour are more likely to complete the measures.

TABLE 7: CHANGE OVER TIME ON PARENT REPORT SDQ

Parent report SDQ scale	Time 1 Mean score (standard deviation)	Time 3 Mean score (standard deviation)	Mean difference	T test result	Effect size *p<0.05 **p<0.01
Total score	18.4 (7.1)	14.9 (6.4)	-3.6 (5.4)	t(72) = 5.722, p < .000	d = 0.7**
Emotional difficulties	4.2 (2.7)	3.5 (2.6)	-0.7 (2.1)	t(72) = 2.786, p = .007	d = 0.3*
Conduct problems	4.0 (2.4)	3.0 (2.0)	-0.9 (1.9)	t(72) = 4.090, p < .000	d = 0.5**
Hyperactivity	6.7 (2.8)	5.3 (2.4)	-1.4 (1.8)	t(72) = 6.465, p < .000	d = 0.8**
Peer problems	3.6 (2.4)	3.0 (2.0)	-0.6 (2.1)	t(72) = 2.311, p = .024	d = 0.5*
Pro-social behaviour	7.6 (2.1)	8.1 (2.0)	0.5 (1.7)	t(72) = -2.667, p = .009	d = 0.3*
Impact	2.8 (2.6)	1.5 (2.2)	-1.1 (2.4)	t(66) = 3.192, p < .000	d = 0.5**

CHART 3: Percentage of children in each category of severity on the Parent SDQ at T1 and T3



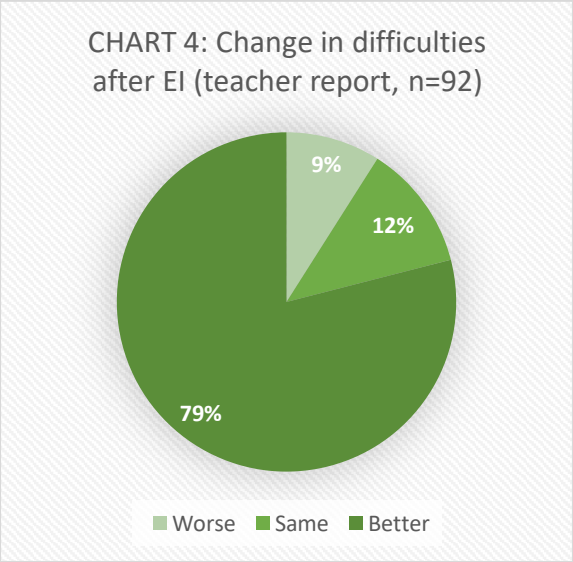
The trends in the severity data also mirror those observed for the teacher report data. Table 8 provides the number and percentage of children whose scores on each subscale reach the different thresholds. Chart 3 visually plots the data specifically for the total difficulties and impact subscale and again illustrates an increase in the proportion of children experiencing close to average difficulties and the reduction in children experiencing very high levels.

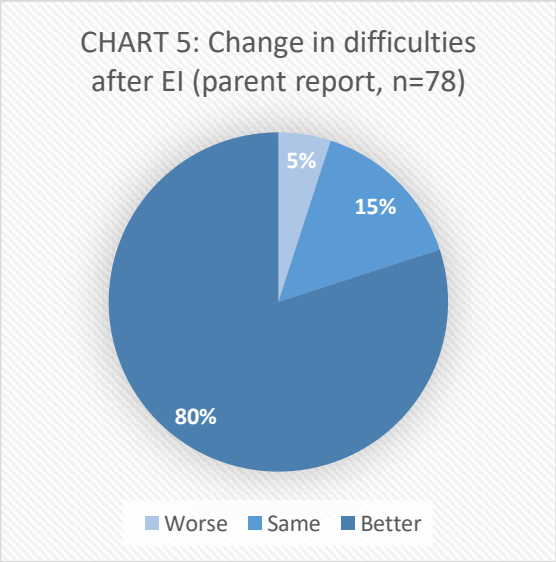
TABLE 8: CHANGE OVER TIME IN SDQ THRESHOLDS

Parent report SDQ subscale	Close to average	Slightly raised/ slightly lowered	High/low	Very high/ Very low
Total difficulties T1	19 (26%)	9 (12%)	11 (15%)	34 (47%)
Total difficulties T3	34 (46%)	13 (18%)	10 (14%)	16 (22%)
Emotional difficulties T1	30 (41%)	11 (15%)	17 (23%)	15 (21%)
Emotional difficulties T3	42 (58%)	8 (11%)	13 (17%)	10 (14%)
Conduct problems T1	23 (32%)	13 (18%)	19 (26%)	18 (24%)
Conduct problems T3	32 (43%)	15 (21%)	18 (25%)	8 (11%)
Hyperactivity T1	24 (33%)	16 (22%)	9 (12%)	24 (33%)
Hyperactivity T3	37 (51%)	23 (32%)	6 (8%)	7 (9%)
Peer problems T1	25 (34%)	12 (16%)	11 (15%)	25 (35%)
Peer problems T3	33 (45%)	15 (21%)	6 (8%)	19 (26%)
Pro-social behaviour T1	42 (58%)	13 (18%)	6 (8%)	12 (16%)
Pro-social behaviour T3	47 (65%)	9 (12%)	9 (12%)	8 (11%)
Impact T1	19 (28%)	6 (9%)	10 (14%)	34 (49%)
Impact T3	36 (51%)	11 (15%)	6 (9%)	18 (25%)

OVERALL ASSESSMENT OF CHANGE ACCORDING TO BOTH PARENTS AND TEACHERS

At the end of the intervention, TLG administers the 'follow-up' version of the SDQ. This includes a question that asks if the respondent feels the child's difficulties are improved or not since receiving the EI programme. As illustrated in Charts 4 and 5, the large majority of both parents (79%) and teachers (80%) report that the children's are better at the end of the intervention. For a small number of cases parents (5%) and teachers (9%) felt that the children's problems had got worse and the remainder had stayed the same.





CHANGE OVER TIME RATED BY CHILDREN ON THE SCHI (N=78)

A paired-samples t-test was used to determine whether there was a statistically significant mean difference between scores on the School Children's Happiness Inventory at the start of the intervention and scores at a final timepoint. Participants had higher happiness scores at the end of the intervention (M = 99.0, SD = 13.7) than at the start of the intervention (M = 92.1, SD = 16.7), a statistically significant mean increase of 6.94, 95% CI [3.1, 10.8], t(77) = 3.571, p = .001, d = 0.4. There is also a trend over time for more children to score average or above on the SCHI at T3 than at T1, as depicted in Table 9.

Overall there appears to be a trend towards increased subjective wellbeing or happiness as reported by children at the end of the intervention when compared to their reports at the beginning of EI.

TABLE 9: CHANGE OVER TIME IN SCHI SCORES OVER TIME (N=78)

SCHI	Total score Mean (standard deviation)	Very low Count (%)	Low Count (%)	Low Average Count (%)	Average Count (%)	High Average Count (%)	High Count (%)	Very High Count (%)
Time 1	92.1 (16.7)	8 (10%)	4 (5%)	10 (13%)	36 (46%)	16 (21%)	4 (5%)	0 (0%)
Time 3	99.0 (14.0)	3 (4%)	0 (0%)	9 (12%)	38 (49%)	20 (26%)	8 (10%)	0 (0%)

SECTION FOUR: DISCUSSION OF THE RESULTS

It is clear that TLG are working with children with a wide range of emotional and behavioural difficulties. The summary data on the profile of those difficulties at T1 suggests that on average they experience difficulties at a severity much higher than would be expected for other children of a similar age and stage of development and many of those children (46-47%) at a level suggesting they would reach thresholds for a clinical diagnosis.

Our finding that both parents and teachers are reporting substantial improvements in SDQ scores across the period of EI coaching is very encouraging and provides support for the theory of change developed by TLG for EI. The size of the change experienced by children in the sample does vary, but even small effects can have large impacts on children's day to day functioning and are particularly meaningful in the context of such severe difficulties at T1. That these observed improvements are consistent across both parents and teachers also suggests that the children in the sample are displaying better general behaviour spanning multiple contexts of both home and school over the period of time that they experience EI.

As with any intervention and even with the best intentions, we would not expect all children to experience significant improvements in outcomes over time. However, it is promising that whilst there are still a proportion of children rated by both parents and teachers as having very high scores on the SDQ at T3, subjective reports from parents and teachers suggest that they consider most of the children in the sample to have experienced better mental health and wellbeing as a result of the programme (see Charts 4 and 5).

The findings in relation to children's subjective wellbeing or happiness suggest a small but significant trend towards increased wellbeing at the end of the programme. It is also striking that the large proportion of children commencing EI rate their own wellbeing in line with the average level we would expect for children of a similar stage of development (according to the measure developer). This reflects the wider research literature on subjective wellbeing as a distinct construct from emotional and behavioural difficulties i.e. it is not always the case that poor behaviour is associated with low levels of subjective wellbeing and vice versa. The size of the improvements in this outcome are relatively modest, however the direction of change is positive and again in line with the theory of change for EI.

The overall picture painted by these data is very positive and encouraging in terms of the potential impact of EI. However, it is extremely important to bear in mind several methodological limitations that prevent us attributing a causal relationship between EI and the positive improvements observed on both the SDQ and SCHI. First of all, and perhaps most significant is the absence of a comparison or control group with which to compare the results. Without comparison data, there is a possibility that these improvements are caused by some other factor or change in circumstance for the children in the sample. There is also some missing data, and a strong possibility that these are cases where children have

dropped out or are not engaging fully with the programme making compliance with the request to complete the measures difficult. The consequence of this means that the data analysed does not present a full picture of the experience of children receiving EI and the analysis may therefore over-estimate the improvements in these key outcome areas. Finally, there is a potential for bias from parents and teachers who completed the SDQ – they are aware that the child they are rating has received an intervention and therefore will be anticipating some positive improvements.

Notwithstanding these caveats, the data presented in this report is very promising and provides vital information for the design of any future evaluation of the EI coaching programme. It is my belief that TLG has now gathered sufficient evidence to be judged positively against Nesta's Level 2 standard of evidence.

SECTION FIVE: RECOMMENDATIONS

There are fewer parent-completed measures compared to teacher completed measures, particularly at time 2 though this is not surprising or unusual for a volunteer-led programme implemented in schools. However, it is important to build on progress in this area and continue attempts to capture parent reports - their perspectives can reveal the extent to which impacts might generalise across other contexts i.e. from school to home.

It is recommended that TLG continue to collect and interrogate their outcome data. Once a sample of 200-300 children with T1 and T3 questionnaires has been obtained it should be possible to conduct a variety of additional sub-group analyses to further explore the potential impact of EI over time. For example:

- To explore age, gender and possibly regional differences in outcomes at T3 in order to unpack the conditions under which EI might be having the most positive effect on children's emotions and behaviour.
- To fully utilize the interim data gathered at T2 during the mid-way point to explore differential effects over time and consider the optimal length of the intervention.

With regards to further evaluation there are two main recommendations. The first is to conduct a well-designed mixed-methods process evaluation to explore patterns of implementation (i.e. length of intervention, number of sessions, content delivered, fidelity levels etc) as well as barriers and facilitators of EI delivery and in-depth perspectives from the experience of children, parents, mentors and teachers (e.g. about what works well and not so well, what effects the intervention has had and how). This type of evaluation would be useful for informing both the ongoing development of the programme as well as the parameters for any future independent evaluation of EI.

The second recommendation, and this could be implemented alongside the first as part of a single study, would be to conduct a more formal impact evaluation involving a comparison group. This would enable an assessment to be made against Nesta's Standards of Evidence Level 3 and provide more robust data on whether the positive improvements in outcomes documented in this report can be attributed to the EI programme.

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