

Evaluating the Elklan Talking Matters Programme: Exploring the impact of a training programme for early years professionals on pre-school children's language development

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Abstract

Training early years practitioners to facilitate the language development of young children is a widely used intervention. Evidence to support the effectiveness of training in terms of the impact of children's language development is limited. The Elklan Talking Matters programme is an accredited training programme for early years practitioners. Practitioners train to be Lead Communication Practitioners (LCPs) who cascade training across early years settings or Key Communication Practitioners (KCPs) who are embedded into these settings. The aim of this study was to identify if the Talking Matters Programme is effective in facilitating the language development of pre-school children. One hundred and twenty-six children from 13 early years settings were recruited (mean age 27.81 months; SD 4.90). Thirteen settings participated in the Talking Matters Programme (five LCP+KCP settings, four LCP settings and four control settings). At time 1, prior to practitioners participating in the programme, children completed the Pre-School Language Scales 5th Edition (PLS-5), a standardized assessment of receptive and expressive language. At time 1, 126 children completed the baseline assessment ($n = 43$ in the LCP+KCP settings, $n = 43$ in the LCP settings and $n = 40$ in the control settings). Children then completed the post intervention (time 2) assessment approximately six months later. Children in the intervention groups (LCP+KCP settings and LCP settings) made more progress in their language development from time 1 to time 2 compared to the control. The children in the LCP+KCP settings made more gains than the children in the LCP settings. A significant main effect of groups and time was found but not an interaction of group scores with time, meaning the increases in scores were not statistically significant between the intervention and control groups.

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The study provides tentative evidence that the Talking Matters programme has a positive impact on pre-school children's language development.

Keywords

early years, evaluation, impact, language development, practitioner training

I Introduction

The early years is a key period for children's language development. Children who are delayed or impoverished in their language development in the early years are at risk of difficulties in learning to read and write, and subsequent educational under-achievement (Law et al., 2017; Roulstone et al., 2011). High quality training of early years practitioners to facilitate children's language development is vital. Training early years practitioners is a widely used intervention approach in the UK. A range of training programmes or packages now exist and are delivered at a local level, e.g. a bespoke programme designed by a speech and language therapy service and delivered to early years settings in their area or published training programmes delivered nationally by accrediting organizations such as ICAN Talk Boost (ICAN), The Nuffield Early Language Intervention and The Hanen Centre programmes (The Hanen Centre). Ultimately, these training programmes share the aim of training early years practitioners to facilitate the language development of the children they work with. However, training programmes do differ in their scope. Some training programmes focus on increasing staff knowledge of children's speech, language and communication to enable earlier and more accurate identification of speech, language and communication needs. Others focus on enabling staff to implement changes in their practice to engage in more language and communication facilitating strategies with all children or children identified with language vulnerabilities and/or to implement more communication friendly environments to benefit all children. Despite the increase in training programmes, early years practitioners report limited access to training in this area (Letts & Hall, 2003; Mroz, 2006) and studies report trained practitioners do not easily implement strategies to facilitate children's language development into their settings (McDonald et al., 2015; Pence et al., 2008; Turnbull et al., 2009).

Evaluation studies of the Hanen Learning Language and Loving It (LLLI) full and modified versions are positive showing that early years practitioners can learn communication facilitating strategies and are observed to use these in their practice (Cabell et al., 2011; Girolametto et al., 2003, 2004; Piasta et al., 2012). The impact of the implementation of these strategies on the children's language development is less clear, although Flowers et al. (2007) showed that children's verbal responses did increase in shared book reading activity. McDonald et al. (2015) evaluated an approved adapted version of the Hanen LLLI programme by focusing on the impact of the training on the practitioners' use of language and communication facilitation strategies. The training consisted of three group sessions each three hours long where trainees learn and practice the strategies. The eight trainees (all early years educators) video recorded their interactions with the children they work with pre and post the training as part of a multiple baseline design. Videos were analysed and coded to identify the number and type of strategies employed. There was a statistically significant increase in the use of one communication facilitating strategy and a decrease in their use of one conversation-hindering behaviour. Brebner et al. (2016) developed a professional development programme for early years practitioners across four childcare settings where the programme was delivered for two days a week over a period of eight weeks. The programme was individualized to the practitioners and the settings in terms of learning goals and support across knowledge of and

practice in supporting all children in their language development. Evaluation consisted of interviews with the practitioners and the centre directors with some observation of the post-training practice of the trainees. The qualitative evaluation highlighted increased knowledge of how to identify children who need additional support and/or onward referral but also the value of the collaborative approach between the trainers and the trainees. These studies show that early years practitioners can develop their knowledge and change their practice but whether this facilitates the language development of the children the practitioners work with is not known.

More recently, there has been a move to training practitioners to deliver more intensive manualized interventions individually or to small groups of children identified with language delay as measured by standardized assessments (Dockrell et al., 2010; Fricke et al., 2013, 2017; Reeves et al., 2018). Here, the training programme is evaluated in terms of its impact on children's language and literacy development so does training the practitioners to directly deliver group or individual interventions improve these children's language and literacy? The Nuffield Early Language Development Programme (Fricke et al., 2017) trains teaching assistants (TAs) to deliver intensive manualized intervention to small groups and individual children who have been assessed through standardized measures as having weak oral language skills. Fricke (2013) evaluated a 30 week programme where teaching assistants delivered the intervention for 10 weeks in nurseries (3 to 4 years of age) followed by 20 weeks when the children moved up to reception/first year at school (4 to 5 years of age). The TAs delivered the intervention directly to the children in small groups or individually in 20 to 30 minute sessions three times a week. The evaluation employed a randomized control trial (RCT), assessing the children on standardized assessments of language and literacy. The intervention was effective in improving the language but not the literacy skills of the children receiving the intervention with this improvement maintained at a follow up assessment six months later. Fricke et al. (2017) followed this initial study by using a RCT to evaluate a shorter 20 week programme to reception age children (4 to 5 years of age) assessed with poor language skills. Small significant improvements in the children's language were made compared to controls but again there was no improvement in literacy skills. When comparing the 30 week programme against the 20 week programme, the authors suggest the 10 weeks of the intervention delivered to the children in the nursery settings was less effective than when delivered in the reception year in school. Hayley et al. (2017) investigated this further by using a RCT to evaluate a 15 week programme modified from the Nuffield Early Language Development Programme. The mean age of the children was 3 years and 11 months and they were assessed on a range of standardized language and literacy measures in addition to a bespoke measure of taught vocabulary. After the intervention, a significant improvement was only found on the taught vocabulary measure with no generalization to the other measures of language and literacy. The authors advise a 'cautionary tale' here where evaluations of these interventions need to include control groups to ensure any improvements identified are a result of the intervention rather than other factors. They conclude that small group/individual intervention may not be the most effective model in these settings as these younger children may benefit more from a setting where language facilitation is embedded by early years practitioners into all the activities and environment of the setting.

To investigate the effectiveness of training programmes in nursery settings, Reeves and colleagues (2018) conducted an effectiveness study of the ICAN Early Talk Boost programme (ICAN, 2011). This programme is designed for pre-school children where practitioners attend a one day training course to learn how to use and deliver the manualized programme to small groups of children. In this study, the settings identified children who they considered would benefit from taking part in the programme. Children received the intervention in groups of 5 to 7 children for a 20 minute session three times a week over a period of nine weeks. The Pre-School Language Scale (PLS-4) was used to assess the intervention and waiting control children. The intervention children

improved significantly in their language scores compared to the control children showing that intensive manualized interventions delivered by early years practitioners are effective.

In summary, there is now evidence to show that training programmes which train practitioners to deliver manualized interventions at the level of small groups or individuals are effective in facilitating children's language development. These programmes rely on highly trained practitioners delivering intensive interventions directly to children with some level of identified need and the programmes have been specifically developed as part of the research rather than at a service delivery level. An alternative approach is to train all practitioners in a setting to work with all children to facilitate their language development as part of their daily interactions with the children and routine in the setting. In this approach, children experience regular and structured opportunities to develop their language through their interactions with practitioners where the practitioners are trained to interact with and talk to children using strategies that facilitate their language development. There is limited evidence about if and how these latter training programmes impact on children's language development. This study offered an opportunity to conduct a feasibility study to identify whether the Elklan Talking Matters programme has a positive impact on facilitating the language development of young pre-school children.

II Background to the study

Talking Matters is a training programme aimed at practitioners working with children in early years settings (0 to 3 years). Talking Matters aims to facilitate knowledge of and skills in supporting children's speech, language and communication to improve their outcomes. A key component of the training enables settings to be communication friendly and to embed communication facilitating and language modelling strategies with all children across all aspects of the settings. Practitioners can complete the training to be Lead Communication Practitioners (LCPs) or Key Communication Practitioners (KCP) (for details about the Talking Matters training, see Appendix 1). LCPs engage in more in-depth training than KCPs. LCPs and KCPs both complete step 1 of the training and LCPs only (and not KCPs) complete steps 2, 3 and 4 (see Appendix 1). LCPs' training is accredited at level 4, which is equivalent in standard to a foundation degree (a foundation degree is a combined academic and vocational qualification in English higher education, equivalent to two thirds of an honours bachelor's degree in a University in England). KCPs' training is accredited at level 3, which is equivalent in standard to an English A level (an A Level is a school, subject-based qualification typically taken at the end of secondary school education at 17–18 years in England). Once trained, LCPs cascade a less in-depth training course called 'Communication Counts' to all staff in their settings, and mentor settings (through four visits) to undertake an externally accredited audit to achieve Communication Friendly Setting status. KCPs are practitioners working in a setting who support the visiting LCP to cascade the training to their colleagues in the setting. KCPs are therefore available to provide on-site support and guidance to their colleagues in their setting.

The LCP (trained to level 4) has more in-depth knowledge than the KCP (trained to level 3). Although the LCP is trained to a higher level, the LCP is only able to cascade the training and mentor on a visiting type basis with a maximum of four visits to each of their settings. This means the settings with access to a LCP and then a KCP working in the setting also have access to an additionally trained practitioner (i.e. the KCP) who works in the setting and is consistently available to support the cascaded training from the LCP.

The overall aim of the evaluation was to conduct a feasibility study to identify whether the Elklan Talking Matters programme has a positive impact on the language development of young (0 to 3 years) pre-school children. The study asks the following two questions:

- Is the Talking Matters programme effective in facilitating the expressive and receptive language abilities of young (0 to 3 years) pre-school children?
- Is the enhanced LCP+KCP training more effective than the LCP training in facilitating the expressive and receptive language abilities of young (0 to 3 years) pre-school children?

III Method

This study evaluates the Talking Matters Programme as part of a wider Elklan Talking Matters Programme delivery to 128 early years settings across England. Only 13 of these 128 settings were recruited to this study. All 128 settings were invited to participate in the study. Twenty-one settings expressed an initial interest in participating. Once the requirements of participating in the study were explained to these 21 settings, 13 settings confirmed they were able to participate. All 128 settings received cascaded training from a LCP. Practitioners in sixty-nine of the 128 settings completed a training course: Speech and Language Support for children aged 0–3 years, accredited at level 3 to be KCPs. These 69 settings had a KCP in the setting and a LCP visiting the setting to deliver cascaded training. Of the 13 settings participating in this study, 4 were LCP settings, 4 were control settings and 5 were LCP+KCP settings.

I Settings

Participants from 13 early years settings were recruited from four participating Local Authorities (LAs). The settings consisted of nurseries, pre-schools and children's centres (for further details, see Table 1). The settings differed in terms of the number they provided for (ranging from 25 to 105 children per session) as well as the number of staff employed in the settings (ranging from 10 to 30). Settings have to comply with a staff ratio of one adult to 3 children (under 2 years of age). In terms of qualifications, some or all staff were qualified at Level 2 or above in early years. A member of staff in setting B had completed the Elklan Under 5 years training and a further member of staff also in setting B had completed training as part of the Early Language Development Programme (ELDP) (Department for Education (DfE)). Staff in the 12 remaining settings had no previous experience of Elklan or similar training programmes. Table 1 details 12 of the settings' most recent Ofsted Inspections with all 12 settings receiving Good or Outstanding Judgements. The remaining setting was waiting for their first Ofsted Inspection.

One LCP+KCP setting, one LCP setting and one delayed control setting (a setting which received the Talking Matters programme after the study had finished) was identified and recruited from each LA. However, in one LA it was not possible to identify one LCP+KCP setting with enough potential participants. Therefore, in this LA, the LCP+KCP setting was two settings with a smaller number of participants.

The English indices of deprivation (Department for Communities and Local Government, 2015) were used to obtain data about the level of deprivation each setting was located in. The indices use categories of income, living environments, employment, education, skills and barriers to housing and services. Comparative data is derived in terms of relative deprivation using a percentage scale. For example, an area ranked as < 60 on the index of employment means the area is in the 60% most deprived areas for employment. An area ranked as > 30 means it is in the 30% least deprived areas for employment. The settings were ranked from the least to the most deprived using the indices (see Table 2). Five settings were in the 50% most deprived areas and eight settings were in the 50% least deprived areas. Of these eight settings, four were in the 30% least deprived areas. More LCP settings ($n = 3$) were in the 50% most deprived settings compared to one control and one LCP+KCP setting. More control ($n = 3$) and LCP+KCP ($n = 4$) than LCP settings ($n = 1$) were

Table 1. Description of the 13 early years setting participating in the study.

Setting	Number of staff	Staff qualifications	Most recent Ofsted rating
A	27	Majority have early years qualifications at Level 3 or above; 2 staff working towards Foundation Degree	Outstanding in all areas
B	9	Manager has an early years degree; 5 staff have Level 5 or equivalent. Over 50% of staff have Diploma in Pre-School Practice; 1 staff member completed Elklan under 5 years training and 1 staff member completed training as part of the Early Language Development Programme (ELDP)	Good in all areas
C1	10	Supervisor and Deputy supervisor have a BA Child Development; other staff all National Vocational Qualification (NVQ) Level 3 Childcare	Outstanding in all areas
C2	Not given	Manager has a Foundation Degree in Childhood & Education. Information about qualifications of other staff not given.	Not yet inspected Opened 2014
D	10	All staff have early years qualifications at Level 2 or above	Good in all areas
E	10	Manager has Early Years Professional Status; 7 staff have qualifications from Level 2–6; 2 staff are apprentices	Good with outstanding features
F	12	Manager has a BTEC National Diploma L3 nursery nursing; 1 staff has Qualified Teacher Status (QTS); 10 staff have Level 2–5	Good in all areas
G	26	15 staff have early years qualifications level 3 and above	Good in all areas
H	18	17 staff have early years qualifications. Head of Early Years has Early Years Professional Status and a BA Early Childhood & Education. 2 staff have Early Childhood Studies foundation degrees.	Good in all areas
I	21	Manager has a BA Early Childhood Studies & Early Years Professional Status. 80% of staff have degrees; 2 Qualified Teacher Status (QTS)	Good in all areas
J	30	26 have Early Years qualifications at level 2 and above	Good in all areas
K	13	All staff have early years qualifications	Outstanding in most areas
L	19	17 have Early Years qualifications from Level 2 to Early Years Professional Status	Outstanding in all areas

in the 50% least deprived settings. Overall, more LCP than control and LCP+KCP settings were ranked in the more deprived areas

2 Participants

Fifteen children were identified by each setting to participate in the study with a total number of 180 participants. This over recruitment aimed to reduce the impact of high attrition between the time 1 (pre-intervention) and time 2 (post-intervention) assessments. Exclusionary criteria were: children already known to local speech and language therapy services as the Talking Matters programme is not aimed at staff working with children with identified speech, language and

Table 2. Ranking of the 13 settings according to the English Index of Multiple Deprivation (IMD) 2015.

Setting	Condition/ group	IMD rank (/32844)	IMD %	IDD rank	IDD %	ED rank	ED %	EST rank	EST %	Ranking of deprivation
B	LCP	8981	< 30	7935	< 30	9094	< 30	5860	< 20	1 (most deprived)
D	Control	10031	< 40	11125	< 40	7414	< 30	10386	< 40	2
L	LCP+KCP	13113	< 40	15491	< 50	9934	< 40	8699	< 30	3
E	LCP	15366	< 50	15912	< 50	10494	< 40	10901	< 40	4
H	LCP	13622	< 50	14375	< 50	18817	> 50	24621	> 70	5
C2	LCP+KCP	19084	> 50	19329	> 50	19572	> 50	21294	> 60	6
K	LCP	17664	> 50	16334	< 50	14184	< 50	11395	< 40	7
G	Control	17811	> 50	14590	< 50	17795	> 50	30321	> 90	8
C1	LCP+KCP	20375	> 60	14221	< 50	17983	> 50	18283	> 50	9
I	LCP+KCP	23123	> 70	22963	> 60	25466	> 70	30639	> 90	10
J	Control	23997	> 70	20260	> 60	20022	> 60	17915	> 50	11
F	LCP+KCP	26607	> 80	25569	> 60	20630	> 60	26849	> 80	12
A	Control	29273	> 80	23895	> 70	29675	> 90	27508	> 80	13 (least deprived)

Notes. KCP = Key Communication Practitioner. LCP = Lead Communication Practitioners. IMD = Index of Multiple Deprivation. IDD = Income Deprivation Domain. ED = Employment Domain. EST = Education, Skills and Training.

communication needs (SLCN); children who had reached the age of 36 months (3;0) at time 1 (T1) as this is the maximum age of children the Talking Matters programme is aimed at; and children with English as an Additional Language (EAL) as identified by either the staff in the setting or the researcher completing the assessment. If a setting identified more than 15 potential participants, the first 15 identified were recruited to the study. However, no settings identified more than 15 participants who met the criteria.

In total, the 13 settings identified 129 children with parental/carer consent. Three children then withdrew due to changes in parental/carer consent and/or late identification of EAL. Overall, 126 children (63 male and 63 female) across 13 settings were recruited with a mean of 10.5 children recruited from each setting.

At Time 1 (T1), the mean age of the 126 participants was 27.81 months (S.D. 4.90); range 16 months (1;04) to 35 months (2;11). There was considerable attrition from T1 to T2 despite efforts to reduce this. In total, 87 children (45 males and 42 females) with a mean age of 27.94 months (SD 4.85; range 16 to 35 months) participated at both T1 and T2.

IV Study design

The study employed a repeated measures between group comparison design. In each setting, assessment of the children was completed at time 1 (T1) before staff in the setting received the Talking Matters programme and again approximately six months later at time 2 (T2) after the programme. The timing of T2 data collection was constrained by delays to the delivery of the training. The delivery of the training to the practitioners in the 13 settings recruited to this study was part of the wider roll out of the Talking Matters programme to 128 settings across England. Other constraints were practical concerns relating to each setting in terms of being able to manage researchers coming into the setting, and availability of the participants over the summer holiday period. Therefore, it was not always possible to visit settings for T2 data collection at a

Table 3. Design and timeline of the evaluation study.

November–December 2015	January–March 2016	May–September 2016
Time 1 (T1) Baseline data collection	Elklan training	Time 2 (T2) Outcome data collection

Table 4. Length of time between the T1 (time 1) and T2 (time 2) assessments in the control, LCP+KCP (Lead Communication Practitioners + Key Communication Practitioners) and LCP settings.

Settings	Mean days from T1 to T2	Minimum (months)	Maximum (months)	Mean number of months from T1 to T2
Control ($n = 4$)	203.78 (27.00)	162 days (5 months)	282 days (9 months)	6 months
LCP+KCP ($n = 5$)	200.11 (23.87)	162 days (5 months)	225 days (7 months)	6 months
LCP ($n = 4$)	205.91 (22.26)	169 days (5 months)	280 days (9 months)	6 months

consistent time following the training across all settings. Table 3 shows the design and timeline of the study.

Table 4 shows the mean number of days from the T1 to T2 assessments for the control, LCP+KCP and LCP settings. The timings of the delivery of the Talking Matters programme and the T2 assessments in each setting is highlighted. Data as to the exact length of time between the delivery of the Talking Matters programme and the T2 assessments is not available.

The mean number of days between the T1 and T2 assessments was similar across the control, LCP+KCP and LCP settings. The control and LCP settings had a longer maximum time at 9 months compared to 7 months for the LCP+KCP settings.

1 Ethics

The study received ethical approval from the University of Sheffield Ethics Committee.

2 Measures

Children's language development was measured at both T1 and T2 by a face-to-face direct play-based assessment of language comprehension and expression using the Pre-School Language Scales 5th Edition (PLS-5) (Zimmerman et al., 2014). This is a standardized assessment measure with normative data, which allows for the calculation of standardized scores. Due to the age of the participants, this assessment needed to be short with assessments taking no longer than 30 minutes. A familiar member of staff, usually a key worker was present during the assessments in order to enable participants to settle in the assessment room and thus perform to the best of their ability. Assessments were carried out by qualified speech and language therapists who received training in the administration of the PLS-5 from the authors. The assessors were blind to whether the setting was a control, LCP+KCP or LCP setting. The PLS-5 yields raw scores and standardized scores for receptive and expressive language and a raw score for total language (receptive and expressive language raw scores combined). The raw scores were used in the analyses.

3 Procedures

All assessment visits were initially arranged by the research team in conjunction with the settings. Settings were asked to provide a quiet, separate space for assessors to see the children in.

4 Analysis

Data was entered into SPSS version 20. Descriptive and statistical analysis was then completed. The mean scores, standard deviations (SD) and ranges are given for the control, LCP+KCP and LCP groups. A two factor mixed design ANOVA was conducted for receptive language, expressive language and total language using the raw scores. The purpose of this ANOVA analysis was to determine the interaction between time and group, a main effect of time and a main effect of group. Post-hoc t-tests were then used to statistically analyse any change in scores from T1 to T2 in each of the control, LCP+KCP and LCP groups. Only those participants that took part in both assessments (T1 and T2) are included in the analysis.

V Results

1 Receptive language

The statistical analysis found no significant interaction between group and time ($F(2,84) = 2.306$, $p = .106$, partial eta squared = .052) but did identify a significant main effect of time ($F(1,84) = 159.044$, $p < 0.001$, partial eta squared = .654) with the main effect of group approaching significance ($F(2,84) = 17.01$, $p < 0.06$, partial eta squared = 0.101). The post-hoc pairwise t-tests found no significant differences in any of the mean scores of the three groups from T1 to T2. The receptive language scores of the three groups were similar at the start of the study (see Table 5). From T1 to T2, the LCP+KCP and LCP groups made gains in their receptive language with the LCP+KCP group making the most gains. In contrast, there was a very slight decrease in scores for the control group.

2 Expressive language

The statistical analysis found no significant interaction between group and time ($F(2,84) = 1.76$, $p = .170$, partial eta squared = .040). There was a significant main effect of time ($F(1,84) = 127.02$, $p < 0.001$, partial eta squared = .602) but not group ($F(2,84) = .058$, $p = .94$, partial eta squared = 0.01). Although the expressive language scores of all three groups increased from T1 to T2, the post-hoc pairwise t-tests did not identify any significant differences. At T1, the expressive language scores of the three groups were also similar (see Table 5). In contrast to receptive language, all three groups made gains in their expressive language from T1 to T2 with the scores of the LCP+KCP group increasing the most and the control group the least.

3 Total language

A significant interaction between group and time ($F(2,84) = 2.47$, $p = .086$, partial eta squared = .055) was not identified. There was a significant main effect of time ($F(1,83) = 188.020$, $p < 0.001$, partial eta squared = .683) and of group ($F(2,83) = .26.19$, $p = .048$, partial eta squared = 1.01). The post-hoc pairwise t-tests identified significant differences between T1 and T2 for the LCP+KCP group and the LCP group but not the control group. At the baseline (T1) assessment, the total language scores of all three groups were similar. The total language scores

Table 5. Comparison of time 1 (T1) and time 2 (T2) receptive language and total language raw scores (mean raw scores, standard deviations (SD) and ranges) for the control: LCP+KCP (Lead Communication Practitioners + Key Communication Practitioners) and LCP groups.

	Receptive language		Expressive language		Total language	
	T1	T2	T1	T2	T1	T2
Control (<i>n</i> = 37)	28.95 (SD 5.67) (range 18–39)	27.50 (SD 4.58) (range 26–47) (change -1.46) (<i>t</i> = 1.45; <i>p</i> = .16; <i>r</i> = 0.02)	28.00 (SD 5.59) (range 16–44)	31.22 (SD 4.76) (range 24–45) (change +4.22) (<i>t</i> = 1.45; <i>p</i> = .16; <i>r</i> = 0.50)	56.95 (SD 5.48) (range 34–81)	58.72 (SD 4.76) (range 52–83) (change +1.77) (<i>t</i> = -3.45; <i>p</i> = .15; <i>r</i> = 0.03)
Statistical analysis						
LCP+KCP (<i>n</i> = 32)	28.59 (SD 6.67) (range 16–42)	36.06 (SD 5.46) (range 21–44) (change +7.47) (<i>t</i> = -1.45; <i>p</i> = .16; <i>r</i> = 0.50)	27.56 (SD 6.10) (range 12–44)	35.47 (SD 5.21) (range 23–45) (change +7.91) (<i>t</i> = -1.49; <i>p</i> = .16; <i>r</i> = 0.52)	56.15 (SD 12.06) (range 33–79)	71.53 (SD 9.78) (range 44–85) (change +15.38) (<i>t</i> = -10.94; <i>p</i> = .00; <i>r</i> = 0.60)
Statistical analysis						
LCP (<i>n</i> = 18)	28.4 (SD 7.28) (range 13–42)	33.67 (SD 6.58) (range 23–46) (change +5.23) (<i>t</i> = -2.6; <i>p</i> = .79; <i>r</i> = 0.40)	28.61 (SD 6.42) (range 15–41)	33.89 (SD 5.98) (range 21–44) (change +5.28) (<i>t</i> = -2.6; <i>p</i> = .79; <i>r</i> = 0.40)	57.05 (SD 13.94) (range 32–66)	67.56 (SD 9.78) (range 44–85) (change +10.51) (<i>t</i> = -4.31; <i>p</i> = .000; <i>r</i> = 0.60)
Statistical analysis						

Note. +/- change from T1 to T2 score.

Table 6. Time 1 (T1) and Time 2 (T2) mean chronological and language age equivalent scores for control and LCP+KCP (Lead Communication Practitioners + Key Communication Practitioners) children.

	Chronological age at T1	Chronological age at T2	Language age equivalent score at T1	Language age equivalent score at T2	Difference in language age equivalent score
Control	2 years, 3 months	2 years, 8 months	2 years	2 years	0 month
LCP+KCP	2 years, 2 months	2 years, 8 months	2 years	2 years, 7 months	7 months

increased for all three groups from T1 to T2. The scores of the LCP+KCP group increased the most (+15.38), the LCP group by +10.51 and the control group the least by +1.77.

4 Comparing the LCP+KCP group with the control group

The LCP group was excluded from the next stage of the analysis due to the smaller number of participants in the LCP group. Therefore, the LCP+KCP group only was compared with the control group on receptive language, expressive language and the total language score.

5 Receptive language

Significant main effects of time ($F(1, 67) = 183.862, p < 0.001$, partial eta squared = .733) and group ($F(1,67) = 16.88, p < 0.01$) were identified but there was no significant interaction between group and time ($F(1,67) = 3.19, p = .079$, partial eta squared = .045). The children in the LCP+KCP settings made more progress in receptive language than the children in the control settings.

6 Expressive language

There was a significant main effect of time ($F(1, 67) = 134.171, p < 0.001$, partial eta squared = .667) and group ($F(1,67) = 12.42, p < 0.03$, partial eta squared = .03) but no significant interaction between group and time ($F(1,67) = 1.921, p = .170$, partial eta squared = .028). Similar to receptive language, the children in the LCP+KCP settings made more progress in expressive language than the children in the control settings.

7 Total language

Significant main effects of time ($F(1, 67) = 221.867, p < 0.001$, partial eta squared = .768) and group were found ($F(1,67) = 15.37, p < 0.04$, partial eta squared = .091) but there was no significant interaction between group and time ($F(1,67) = 4.176, p = .065$, partial eta squared = .02). Similar to receptive and expressive language, the children in the LCP+KCP settings made more progress in total language scores than the children in the control settings.

A clearer indication of the children's progress is given by comparing language age equivalent scores (see Table 6). Here, control children remained static during the intervention. The intervention/treated children advanced by 7 months. After the intervention, the LCP+KCP children's language age equivalent scores are only a month behind their chronological age compared to 2 months behind at T1. After the intervention, the language age equivalent scores of the control children was 8 months behind their chronological age compared to 3 months at T1. The interaction between time and group, i.e. if children were in the LCP+KCP group or not, was significant ($F(1,67) = 9.67, p < 0.03$).

In summary, the raw scores and age equivalent scores show the LCP+KCP and LCP groups progressing more than the control group. The analysis only finds a significant main effect of groups and time but not an interaction of group scores with time. This means the statistical analysis does not show the improvement in scores differed between the intervention groups and the control group. However, the statistical analysis of the age equivalent scores does show a significant interaction effect between group and time, and the post-hoc pairwise t-tests are significant for the LCP+KCP and LCP groups but not the control group on the total language scores.

VI Discussion

The aim of this study was to conduct a feasibility study to identify whether the Elklan Talking Matters programme has a positive impact on facilitating the language development of pre-school (0 to 3 years) children. The study provides tentative data to support the potential effectiveness of the Talking Matters programme in facilitating the expressive and receptive language abilities of young pre-school children. The children in the LCP+KCP and LCP groups made more progress in their receptive language, expressive language and total language raw scores than the children in the control group as measured by a standardized assessment, the PLS-5 (Zimmerman et al., 2014). As expected, due to maturation, the children in the control group made progress (increases in raw scores) on expressive language and the total language score but not on receptive language. The children in the LCP+KCP group made more gains (increases in raw scores) than the children in the LCP group. The main effect of time was significant for all three language measures. The main effect of group was significant for total language, approached significance for receptive language but was not significant for expressive language. This means the statistical analysis did not confirm a significant difference between the intervention groups and the control group.

When comparing the LCP group with the LCP+KCP group, the post-hoc t-tests showed the LCP+KCP and LCP groups made statistically significant gains in total language score whereas the control group did not. Analysis of the language age equivalent scores showed the children in the LCP+KCP settings made broadly the expected levels of progress in line with their chronological age but the children in the controls settings did not. This unexpected finding may be due to the inaccuracy of the language age equivalent scores or related to the baseline language abilities of the children which are lower than expected for their chronological age.

The comparison of the LCP+KCP group against the control group showed a significant main effect of time and group for receptive language, expressive language and total language but not the interaction between group and time. The children in the LCP+KCP group made more gains than the children in the LCP group. However, the results do not support that LCP+KCP training is more effective than LCP training. This comparison was hindered by the smaller number of children in the LCP group. The potential effectiveness of the LCP training compared to the LCP+KCP training needs further examination.

The findings from this study are encouraging and lend some support to other research showing that training practitioners to facilitate pre-school children's language development is effective (Fricke et al., 2013, 2017; Hayley et al., 2017; Reeves et al., 2018). The training programme evaluated in this study aimed to train all practitioners through a cascaded model to apply their increased knowledge to change the language and communication environment of the settings rather than delivering a specifically targeted programme to a selected group of children. Haley et al. (2017) advocated that an approach where language facilitation is embedded into all the activities and environment of the pre-school setting may be more effective for pre-school children. These younger children (aged 0 to 3 years) may benefit more from this approach, especially when their attention levels will vary and make engagement in small group structured activity more challenging. Such an approach also has the potential for a wider reach and impact as well as being more cost-effective.

The findings are very tentative but the more positive impact of the LCP+KCP delivery than the LCP delivery indicates the continued presence of a trained practitioner (although not as highly trained as the LCP) may be important. The KCP was consistently on site with collaborative relationships with colleagues already in place. This supports Brebner et al. (2016) in the value of consistent collaborative relationship between the trainer and trainees.

The study was an evaluation of practitioner training in everyday settings. The strengths of the study include the addition of a control group, the use of a standardized language assessment and the blind assessment of the children. As the study was conducted in real life every day settings, there are several methodological limitations. First, a repeated baseline measure design as well as the inclusion of the control group would have identified the stability of the children's language abilities prior to the implementation of the Talking Matters programme. An additional follow up assessment would have determined if the gains made by the LCP and LCP+KCP children persisted over time. Measures which were not the target of the intervention could have been included to determine the specificity of the intervention. Although children were in the same age range and in pre-school settings, there was a wide variation in the ages of the children, the settings they attend, the amount of time they spend in the settings and their language abilities prior to the implementation of the Talking Matters programme. The children recruited were not identified as 'at risk' children with concerns about the language development compared to other evaluation studies (Dockrell et al., 2010; Fricke et al., 2013, 2017; Reeves et al., 2018). Therefore, it is not known why some children may have benefitted more from the intervention than others. Although, the children in the LCP, LCP+KCP and control settings were broadly similar in their language abilities at the time 1 assessment. Settings were recruited from areas with differing levels of deprivation with the control settings from less deprived areas. Further studies should aim to control for level of deprivation across intervention and control settings to try and minimize the potential effects of this. There were only two staff members in one setting who had completed training in children's language development (setting B), however, settings may have been participating in other training programmes not directly related to children's language development which may have impacted on their provision thus questioning how attributable the results from this study are to the Talking Matters Programme.

The expected high rate of attrition was confirmed and will have impacted on the representativeness of the participants at the time 2 assessment compared to the time 1 assessment. The young age of the participating children (between 16 months and 3 years of age) was challenging in terms of continued participation rather than initial recruitment. At this age, children change the days they attend pre-school settings regularly which made the assessment phases challenging. It is also not known if the high attrition rate of the children in the study was also reflected in their overall attendance at the setting. If so, there will be variation in the exposure the children had to the trained staff in the intervention settings which will have impacted on the findings. This is especially pertinent to the children in the LCP settings where there was the most attrition.

In the analysis, the LCP+KCP group was compared with the control group only rather than the LCP group. Caution should be taken in comparing differing levels of training and support as it is can be difficult to differentiate between these and the potential differences in changes to practitioners' knowledge and practice, and subsequent impact on children's language development. The exact duration of the time between the delivery of the training received by the settings and the T2 assessments is not known. This means practitioners in some settings may have had longer to embed changes to their practice from the training than practitioners in other settings. Further studies should consider whether the length of time from the delivery of the training to the post-training assessment has an impact on practitioners' knowledge and practice. These caveats need to be considered in the interpretation of the findings as well as future research aiming to conduct robust evaluations of these interventions.

This preliminary study provides tentative evidence the Elklan Talking Matters programme may have a positive impact on young pre-school children's language development. Training early years practitioners to facilitate children's language development is an important intervention approach. Training programmes need to consider the theoretical rationale as to how practitioner knowledge and practice can be changed and how changes to practitioners' knowledge and practice is measured in terms of the potential impact on children's language development. Further research should investigate the components of practitioner training and changes to the early years' communication environment that may have the most impact on developing children's language.

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Appendix I

Talking Matters training

Talking Matters involves four steps. Lead Communication Practitioners (LCPs) complete all four steps and Key Communication Practitioners (KCPs) complete only step 1. On completion of the training, LCPs achieve accreditation at level 4 and KCPs achieve accreditation at level 3. All steps are quality assured by an Ofqual regulated Awarding Organization.

Step 1:

LCPs and KCPs both attend a course called Speech and Language Support for 0–3s. Accredited at level 3. The course content includes:

Week 1 What is communication?

- Identify the processes involved in communication.
- Demonstrate the wide range of communication difficulties.

Week 2 Adult–child interaction and non-verbal communication

- Examine the effect of adult–child interaction on the development of communication skills.
- Explore the importance of non-verbal communication behaviours.
- Reflect on the use of visual information to help children learn and understand.

Week 3 Play for Language

- Explore the link between play and language development.
- Develop skills to promote play and support language development.
- Consider the development and appropriate support for social play.

Week 4 Listening, attention and understanding spoken language

- Develop strategies to promote listening and attention.
- Develop strategies to encourage the understanding of language including additional languages.

Week 5 The Word Journey – developing vocabulary

- Explore typical development of vocabulary learning.
- Learn strategies to help children to develop a wide and varied vocabulary.

Week 6 The Blank Language Scheme

Discuss supporting verbal reasoning from earliest stages to complex skills including why & how questions, inferences, sequencing, predicting.

Practise modifying the adult's language accordingly.

Week 7 The Language Journey: Encouraging the development of spoken language and clear speech

Develop strategies to encourage the use of early phrases and sentences.

Explore how we articulate sounds and relate this to young children.

Check knowledge of the typical development of speech sounds.

Discuss strategies to support young children with unclear speech.

Week 8 Sharing books, using rhymes and exploring the link to early literacy

Consider the link between songs, rhymes, books, speech, language and early literacy skills.

Explore strategies to promote speech, language and early literacy skills through the use of songs, rhymes and books.

Week 9 Working with parents and carers to support communication development

Consider the important role parents have in developing early communication skills.

Discuss effective ways of supporting parents to achieve this.

Week 10 Linking it all together

Present evidence of applying knowledge gained across the course during everyday activities.

Step 2:

LCPs only (not KCPs) lead four settings to achieve Communication Friendly status. LCPs only (not KCPs) complete a portfolio in the form of a learning log and evaluation of their mentoring to a setting during the setting's journey to become Communication Friendly.

Qualification: Creating Communication Friendly Setting. Accredited at level 4

Learning outcomes	Assessment criteria
The learner/LCP will:	The learner/LCP can:
1. Be able to teach and support staff to embed appropriate theoretical knowledge and practical strategies to support children and young people with Speech Language and Communication Needs (SLCN) in a setting.	1.1 Demonstrate how taught strategies to support SLCN have been modified and implemented to meet the specific ages and differing needs of the children/young people across a whole setting.
2. Be able to evaluate the impact of training staff in (SLCN) strategies.	2.1 Demonstrate the use of a variety of data collection methods to evaluate SLCN training. 2.2 Analyse the data and draw conclusions on the implementation of SLCN training.
3. Be able to motivate and mentor a whole staff team to create a Communication Friendly Setting.	3.1 Mentor staff to a sufficiently high level to enable a setting to submit an audit of the strategies used and changes made to create a Communication Friendly Setting. 3.2 Reflect on own practice of mentoring staff to create a Communication Friendly Setting. 3.3 Submit a plan of continued mentoring of staff and development of Communication Friendly practices in the setting over the next three years.

Step 3:

The LCP only (not the KCP) leads their four settings to achieve communication friendly status and collates evidence of the changes a staff team have implemented in their settings to achieve this status. There are seven sections. An example of one of the sections is included here. Section four is about the interaction. Accredited at level 4.

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| <p>4. Interaction</p> <p>4.1 Practitioners interact in such a way with children as to encourage the development of their speech, language and communication skills. To evidence this please arrange for your LCP to observe 50% of practitioners (to a maximum of 6*) and complete and upload up to 6 examples of the attached form. *50% of practitioners (to a maximum of 6) means if the setting has 10 practitioners, 5 forms must be submitted because this is 50% of the staff. If the setting has only 6 practitioners, 3 forms must be submitted. If the setting has 15 practitioners, 6 forms must be submitted. If the setting has 20 practitioners, still only 6 forms must be submitted.</p> <p>4.2 What has the impact been following changes in the practitioner–child interaction? Write a report of no more than 500 words. It would be helpful to write the report under headings and with the number of changes numbered. What changes have you noticed in the way practitioners interact? What changes have you noticed in the children’s language and communication as a result of changing the practitioner–child interaction? How are you going to maintain this positive outcome?</p> | <p>1. Interaction checklist forms have been completed by 50% of practitioners in the setting to a maximum of 6 forms. Each form is completed with all details provided.</p> <p>2. There is no tick given under the column for ‘never’ for any of the parameters.</p> <p>3. Every form is completed evidencing that each practitioner observed is doing all the things listed in the checklist either ‘sometimes’ or ‘always’.</p> <p>1. The report includes a minimum of 3 changes in the way practitioners interact.</p> <p>2. The report includes a minimum of 3 examples of changes in children’s language and communication as a result of changing the practitioner–child interaction.</p> <p>3. The report includes information about how the changes will be maintained to ensure continued encouragement of the development of children’s speech, language and communication. A minimum of two suggestions are included in the report.</p> |
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Step 4:

The setting evidence is verified and confirms level 4 accreditation for the LCP. Settings are encouraged to visit each other and some external visits are arranged. On completion of level 3, level 4 and setting evidence, the setting is awarded a certificate by an Ofqual regulated Awarding Organization. The LCP achieve their level 4 accreditation.

