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A comparison of traditional SLCN support and Language Link interventions

Background

Language Link is an assessment and intervention package used by schools throughout the UK to boost language skills through universal and targeted interventions. To assess the impact of Infant Language Link we compared the progress of children from schools supported by the package with those from control schools supported by typical in school SLCN support.

The study took place in 13 schools across Birmingham, Kent and Essex with wide and varied catchment areas. The 6 experimental schools were recruited through the Language Link website as schools that had used the Infant Language Link package for at least 1 year. The 7 control schools were identified by local specialist support services as schools providing a typical support offer for children with SLCN (providing the EYFS curriculum and no specific package for supporting SLCN).

Participants

Children aged between 4;01 and 5;02 were identified for the study if they scored below the 24th percentile on the Infant Language Link assessment. Children with English as an Additional Language (EAL) were included, as long as they were not new to English.

	MALE	FEMALE	TOTAL
Experimental Schools	20	16	36
Control Schools	18	14	32

Method

The experimental schools used the Infant Language Link recommendations and interventions with all of the study pupils for two terms. Schools were recommended to carry out the Reception year listening group first and follow this with up to three themed general language groups. Between 2 and 4 groups were carried out with the pupils. A plan detailing the aims, target vocabulary, resources and detailed instructions for each activity is provided by the Language Link programme.

The control schools provided their typical classroom and intervention support for pupils with language and communication needs. Some children received 1:1 intervention from a teaching assistant if this was recommended by local specialist services, e.g. SaLT, but most of the pupils only received support within the classroom.

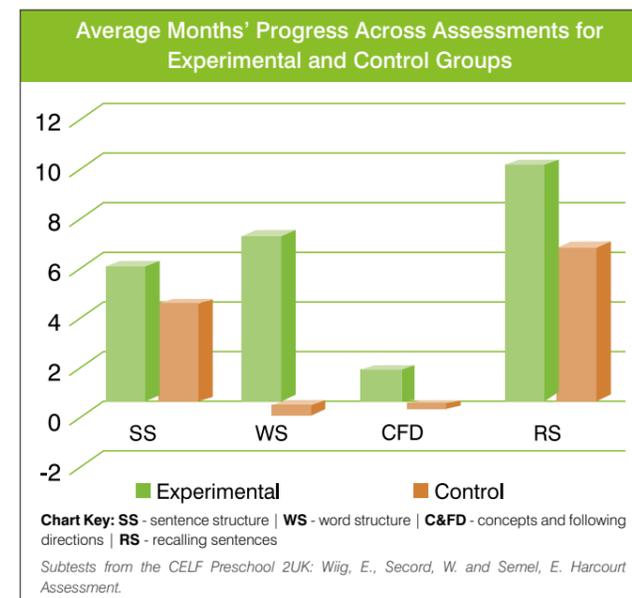
All children were assessed at the beginning and end of the study period on a range of recognised speech and language assessments by the research SaLT team.

Results

Would the Language Link interventions make a difference to the children's language skills?

The results of the study were overwhelmingly positive. There were highly significant differences in performance, with the experimental group making more progress compared to the control group.

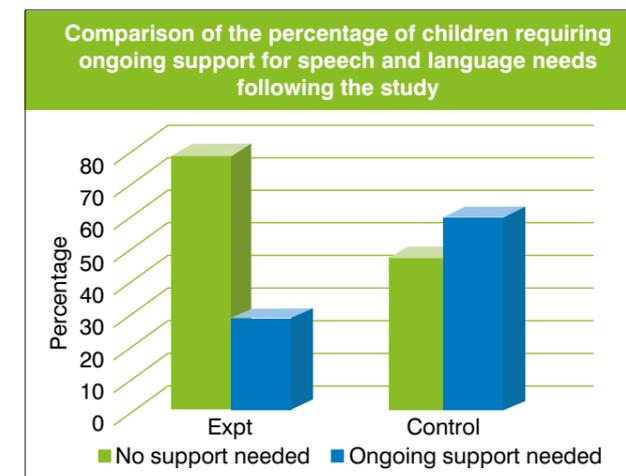
Across the standardised assessment measures, the children in the experimental group made an average of 5 months' progress, above expected progress due to maturation, compared to an average of only 2 months' progress for the control children.



Would children following Language Link make accelerated progress in comparison to their peers?

At the beginning of the study, 36 children from experimental schools were identified as needing support and at the end of this study this figure was reduced to just 9 children (25%) requiring ongoing support.

Many children in the control schools also made progress, however there were significant differences between the two groups. At the beginning of the study, 32 children were identified in the control schools and at the end of the study 17 children (53.1%) continued to require ongoing support.



Comparison of the percentage of children in the experimental and control groups needing further language support at T2.

Would children in the experimental group maintain these gains?

Of the 36 experimental children, 23 were re-screened using the Language Link assessment by their schools at the start of Year 2. These children had received little or no intervention in this time.

	Ongoing support needed at end of study	No support needed at end of study	Ongoing support needed 14 months following study	No support needed 14 months following study
Experimental Children (n = 23)	5	18	4	19

The results show that the children had maintained their gains in language, indicating that the intervention had 'closed the gap' between the children and their peers.

Here's what the schools thought:

"It's great for early identification of speech and language needs. It takes the guess work away and selects the appropriate intervention for you to support the children with. It's a super weapon to add to your wave 1 assessments, it helps you to identify speech and language needs early and rapidly."

K. Bennet, SENCo, St Dunstan's Primary School

"We have been using Language Link in our school for many years now as the children thoroughly enjoy the activities and we see the progress they make whilst having fun!"

K. Burgess, Langley Primary School

CONCLUSIONS

The Language Link interventions enabled children to make more progress with their language skills across the year, than children in the control schools.

There were highly significant differences in performance for the experimental group at T1 and T2 compared to the control group, with more progress made across all the standardised assessment measures.

Infant Language Link is an effective intervention to help schools close the attainment gap.

Infant Language Link is used by schools across the UK in the same way that it was used in the study, so these are the results that you can expect from using the package in your school.



The Wye Forest Early Intervention Project: Raising awareness of SLCN in Reception.

In 2008 Worcestershire LA and Speech and Language Therapy services teamed up to use Language Link to improve early identification for children in the Wye Forest area.

Schools in the Wye Forest area provide communication programmes as an integral part of the curriculum for many children, with the support of the local speech and language therapy (SLT) service. However, referral data showed that 63% of schools' referrals to SLT were made in Year 2 and above with only 20% of children referred in their Reception year. The SLT service wanted to increase Early Years staff confidence to refer children.

Worcestershire LA funded a pilot project for 17 schools to use Language Link for 1 year. The project had 3 key objectives:

- To improve referral rates in the Early Years.
- To build on well-established joint working relationships between the LA, schools and the PCT.
- To evaluate the impact of using Infant Language Link.

Implementation

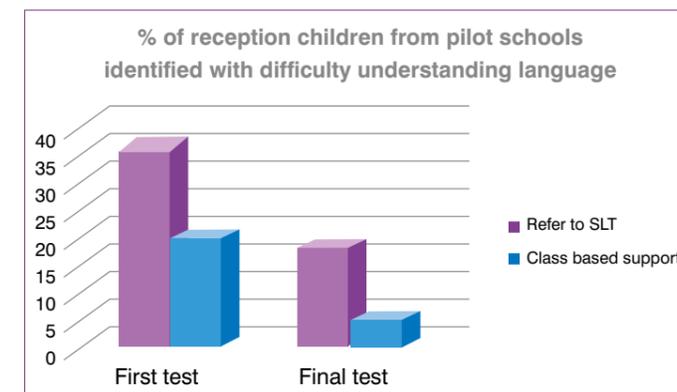
All schools taking part were offered two training sessions. The first session focussed on the assessment and the second on intervention. The schools were asked to screen all their new intake of reception pupils during the Autumn term and then ran interventions during the spring and summer terms. At the end of the year the children were re-assessed. During the year the schools continued to have access to the SLT service and some additional in-school training sessions were offered by the local SLT team.

Headline Results

The outcomes on reassessment showed progress for both individual children, and at a whole class level. Feedback from teachers was positive and 94% of the schools continued to use Infant Language funded from their own school budget.

The project team reported a number of positive outcomes:

- 100% of children who needed to be referred were picked up.
- 78.4% of children with identified SLCN no longer needed support at the end of the year.
- 35.4% increase in teacher confidence.
- 72% of reception classes delivered whole class level interventions as well as small groups.



What did the teachers say?

- 'good analysis for identified children no more hit and miss assessments'
- 'could decide what to tackle as a whole class approach'
- 'identifying children who have difficulties whom you would not expect - 2 big surprises this term'
- 'makes you aware of the whole class as well as individuals'

2018 UPDATE

Following the pilot projects in 2008, Worcestershire LA rolled the project out across the county. The LA provided the funding to buy the package for each school with the schools taking responsibility for funding subscriptions from their own budget in subsequent years. Today over 70% of schools throughout the county continue to use Infant Language Link.

The impact of using Language Link in one Kent Primary School.

Background

Language Link is an assessment and intervention package used by schools to enable pupils with developmental language difficulties and those new to English access the curriculum. To investigate the impact of Language Link interventions a small scales study was carried out in a large mainstream primary school in Kent.

The study took place in a large, three form entry primary school in East Kent. The school had a wide and varied catchment area. Staff were familiar with the Language Link package and had experience delivering the package in previous academic years. All staff involved had previously received training in how to use the package.

Method

The Language Link assessment identified 34 pupils aged between 4:01 and 5:00 years to take part in this study. They were assessed on a range of standardised tests and then assigned to either an experimental group (n=20) or a control group (n=14). The experimental group was divided into smaller groups of 3 or 4 pupils who all received the same small group intervention aimed at improving their understanding of concepts and the ability to follow instructions. The groups ran for 8 x 30 min sessions and were delivered by an experienced Teaching Assistant.

Each Language Link group session involved a warm-up game, two 10 minute activities, and a plenary session. A plan detailing the aims, target vocabulary, resources needed and detailed instructions for each activity is provided by the Language Link programme.

	MALE	FEMALE
Experimental Group	14	6
Control Group	3	11
Total	17	17

This study set out to answer two important questions:

- 1) Would the intervention make a difference?
- 2) What areas of language would improve?

Results

The children in the experimental group who took part in the Language Link intervention made more progress in their ability to follow instructions involving concepts than those in the control group.

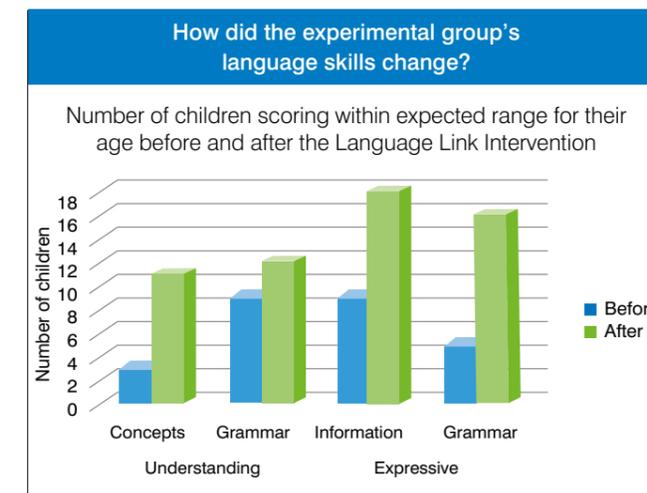
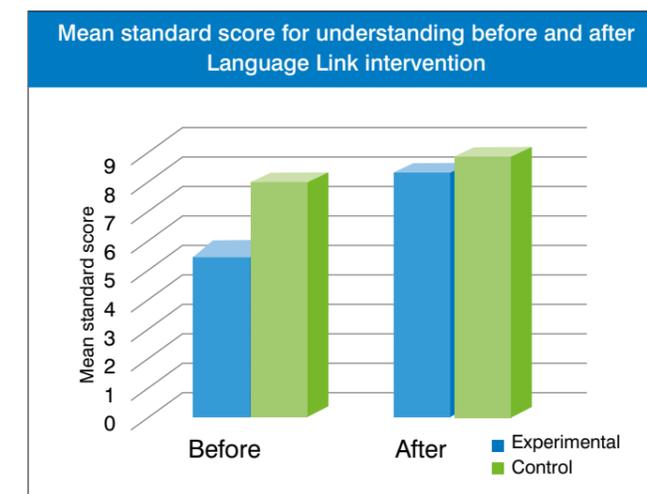
The children in the experimental group also made more progress in other areas of their language.

Mean and SD for experimental and control groups before intervention (T1) and after intervention (T2)

	BPVS		CELF		TROG	
	T1	T2	T1	T2	T1	T2
Experimental Group	92.7 (9.79)	93.2 (8.35)	5.45 (2.43)	8.15 (2.49)	84.9 (6.93)	89.5 (10.3)
Control Group	96.5 (5.96)	97.3 (7.52)	7.78 (1.36)	8.64 (2.06)	91.9 (12.3)	91.2 (13.5)

There was a significant difference ($p < 0.001$) between the two groups before intervention but not after intervention on the CELF 4UK Concepts and Directions test. The children in the experimental group made significant progress in their ability to follow instructions.

Did the children who received intervention make progress with their understanding of language?



After the interventions more children were scoring within the expected range for their age for understanding and expressive language.

CONCLUSIONS

The Language Link intervention group impacted positively on the children in the study. The group targeted understanding of concepts and following instructions.

The children made significant progress in this area compared to the control group. The experimental group also improved in their use of oral language with more children scoring within the expected range for their age following the intervention.



The Language Link Effect: pupil attainment and staff practice.

A key aim of Language Link is to train school staff to identify developmental language difficulties and support them by using recommended strategies effectively. The package aims to train staff to improve outcomes for children.

To investigate the impact of using the Language Link approach, class teachers and staff were surveyed about their experiences of using the package and the difference they felt it had made to their pupils and working practices.

Method

Three surveys were carried out between 2013 and 2017. Data was collected at training sessions and online. In total there were **962** participants across the three surveys. All participants were familiar with the package.

	Number	%
Teachers	161	16.7
Sencos	196	20.4
Teaching Assistants	598	62.2
Senior Leaders	7	0.7

Headline Results

The response to all three questionnaires was positive with **93.4%** of respondents reporting Language Link had made a positive difference to their children.

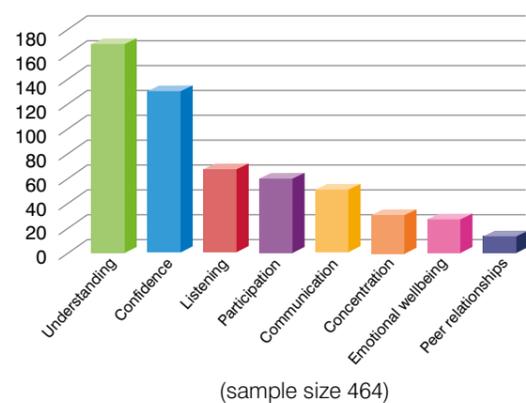
Staff also reported a change in their own behaviour with **71.2%** of support staff reporting they had changed the way they work with children resulting from using Language Link.

The difference Language Link makes

Has using Language Link made a difference to your pupils?

93.4% of participants reported that Language Link had made a difference to their pupils (sample size 962)

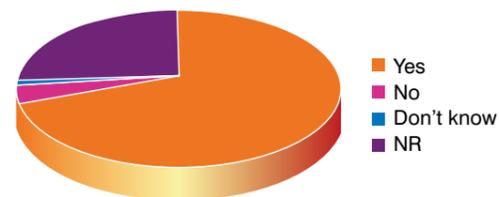
Where have you seen the greatest level of change as a result of using Language Link



Has using Language Link made a difference to your pupil's attainment?

69.2% of participants reported that using Language Link had made a difference to attainment (Sample size 962)

Has using Language Link made a difference to your pupil's attainment?



The greatest improvements were reported for speaking and listening followed by reading.

Has Classroom practice changed?

Has using Language Link made you change the way you work with children?

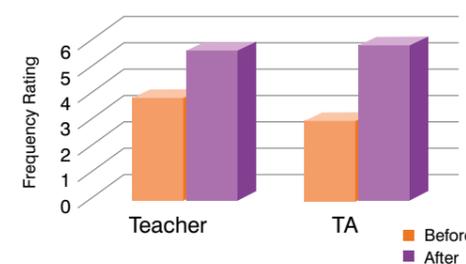
62.5% of participants reported they changed the way they work with children (sample size 962).

A higher number of support staff reported changes to their practice (71.2%) than teachers and Sencos (48.3%).

How have you changed in your classroom practice?

Participants of survey 3 were asked to rate their use of strategies before using Language Link and then again at the end of their first year. There was a significant difference in the frequency of use across strategies for all staff ($P < 0.0001$, sample size 346) with the frequency increasing.

Overall average frequency rating for use of strategies before and after using Language Link



CONCLUSIONS

Overall, using Language Link impacts positively on both children and staff. The majority of staff reported improvements in understanding and listening skills as well as boosting confidence and increased participation in classroom activities.

A high proportion of teaching staff felt that use of Language Link had raised attainment of their pupils beyond expectations.

A very encouraging by product of using the package was the change in classroom practice reported by the majority of participants with increased use of classroom support strategies.



How Derby City reduced waiting times for children with speech difficulties by introducing Speech Link

Speech difficulties are easy to identify right? Well, in reality when a child's speech is a bit unclear schools can find it hard to know if this is appropriate, delayed or disordered. Speech Link was developed by our team of expert Speech and Language Therapists to help schools decide which children needed to see a therapist and which children just needed a simple school based programme. When Derby City wanted to look at reducing numbers of inappropriate referrals to their overloaded Speech Therapy services they decided to use Speech Link. Here's how they got on.

Background

Within Derby City, referrals for school aged children with speech sound difficulties to speech therapy services showed a wide amount of variation. Many children failed to meet the criteria and schools were left unsure of what to do next. In 2006 the local authority purchased Speech Link for 25 schools across Derby City.

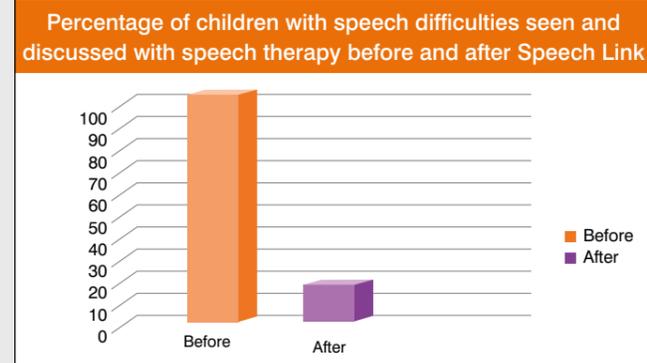
Objectives

The LEA and SLT team overseeing the project set themselves 3 key objectives:

- Ensure only the children who needed therapy were referred.
- Reduce time spent screening the referrals.
- Raise confidence levels in school to support children with delayed speech development.

Results

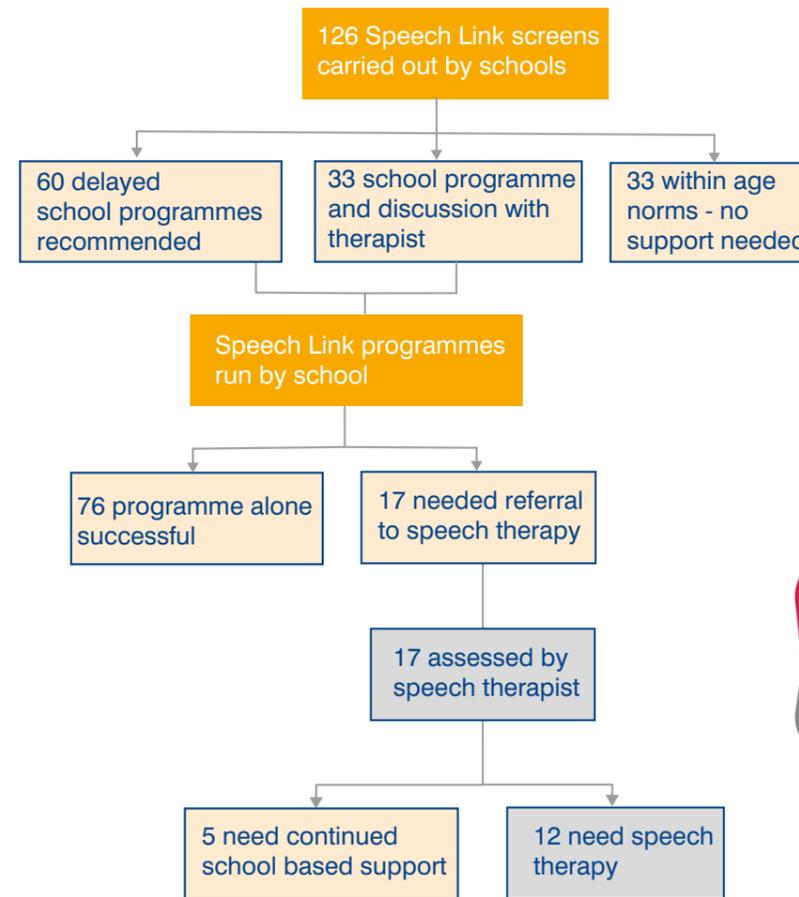
There were extremely positive outcomes for both schools and therapy services. 126 children were identified by schools at the beginning of the project. Previously the therapy service would have seen each child or had a telephone conversation with the school about the child. The schools use of Speech Link dramatically reduced the number of referrals to the therapy service. Of the 126 children identified by schools only 33 were discussed with the therapists. Out of those children 17 were assessed and 12 of those went on to have regular speech therapy. 76 children were successfully managed in school through Speech Link programmes.



Other findings:

- Therapist time was targeted to manage children with the most complex difficulties so **waiting times** for initial assessment for all children in the SLT service **is reduced**.
- **No child** in the 25 participating schools has an **unidentified** speech difficulty.
- School **staff** are **empowered** to identify speech difficulties and implement programmes appropriately.
- Teaching Assistants have developed **additional skills** and experience in identifying and supporting children with speech difficulties.

Speech Link support pathway



Source: Report of Pilot Study Introducing Speech Link into 25 Primary Schools in Derby City, Derbyshire County PCT, NHS

WHAT HAPPENED NEXT?

Following the project, Speech Link was rolled out to the rest of the schools across Derby City and the therapists reported that it had promoted joint work between their services and school staff.

The Therapy services no longer needed to use telephone screening of referrals so waiting times for initial assessments were greatly reduced.

What did the teachers think about Speech Link?

- “Precise, quick identification of how best to support children”
- “Helps us determine the difference between delay and disorder”
- “We don't have to wait for a therapist to give us a programme”
- “Children are motivated by the resources”





The Scarborough Pledge Initiative

Schools across Scarborough have introduced Language Link as part of a wider project to improve outcomes for children in their care. We talked to Head Teacher Vicki Logan to see how Language Link had worked for her school.

Background

In March of 2015 an Education Summit was held in Scarborough to discuss the opportunities and challenges for the local area and what more could be done to improve the outcomes and life chances for young people in terms of their experiences and achievements. As a result, the Scarborough Pledge was created to engage the local community in an upwards shift of perception and ambition for children within Scarborough.

A wide range of diverse but integrated projects and initiatives were implemented to see improvements in standards of education provision to close the attainment gap for the most disadvantaged young people. One of these projects was to develop a model of good practice in relation to speech and language development, building capacity amongst primary staff to support this critical foundation for all learning.

We contacted Vicki Logan, Head Teacher of Overdale Primary, Scarborough to explain how they had used Language Link as part of the Scarborough pledge.

Vicki reported...

"The programme has not only been highly effective in identifying needs in children that we, as educationalists, presume require support but also in identifying children whose teachers did not think they had communication or comprehension gaps. However, on completion of the target interventions these children have made accelerated progress, which is an excellent outcome. Limited language skills and low levels of communication

The Pilot Project

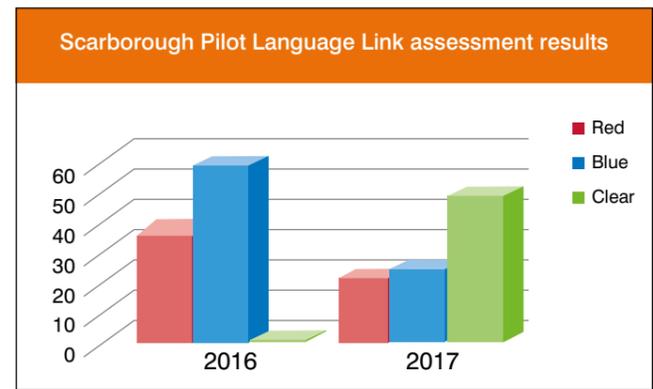
Language Link was introduced to 5 schools in Scarborough in 2016. Each school sent three members of staff to a one day training session and then returned to school to implement the package and cascade the training. Year R, 1 and 2 pupils were screened during the Autumn Term 2016 and recommended interventions were carried out during the year. In Autumn 2017 the children who had received interventions were re-tested using the Language Link assessment.

The Results

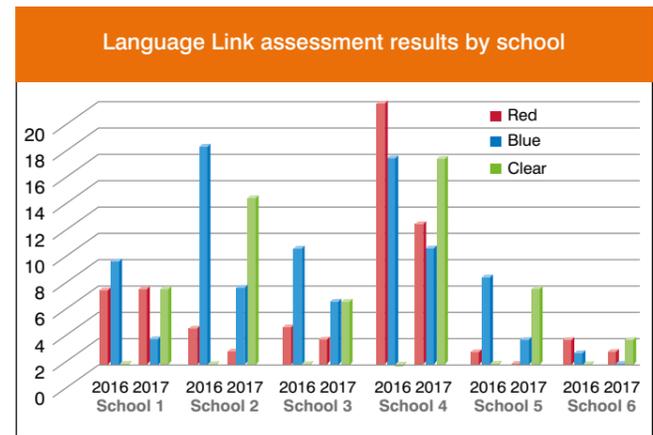
The results were overwhelmingly positive. The teachers and staff enjoyed using the package. Across all five schools 93 children were identified by the initial screening as needing support with 35 of them needing advice from an outside agency. At the end of the pilot 48 of them no longer needed support and only 21 continued to need long term support.

Level of need	Autumn 2016	Autumn 2017
Age Appropriate	-----	48
Discuss with SaLT (Red)	35	21
Class based programme (Blue)	58	33

is the major barrier to learning in communities where there are higher levels of deprivation and low aspirations, the Language Link programme enables whole classes to be assessed and provides a programme to break this barrier down. It's a joy to work with and to see the children make progress because they have access to the interventions that meet their personalised needs."



There was a variation between schools with environmental factors, for example, staffing pressures influencing how much the package was used. The level of need identified at the first screen also varied markedly between schools. Overall all schools felt the package had a positive impact on their children.



Teacher Julie Stewart described how she uses Language Link to support SLCN throughout the school.

Setting up the programme was a daunting task but once the children had been assessed (this took the largest amount of time) everything else fell into place.

The sessions are very easy to follow and adapt where necessary and recording the progress of the children is simple. Within the first few weeks of running the reception class program there was a noticed improvement in the children's listening and concentration skills. The children have also now begun to support each other within the sessions and the peer support given is now evident in class situations too.

The children involved in the sessions are keen to take part and ask me every day if it is their turn to come and "Play listening games today". Other staff running the sessions for different year groups around school have commented that the children enjoy the sessions and how easy the programme is to follow.

The Future

Initially, the project was for a pilot of five schools, but due to the success of this pilot a further ten schools have joined the project in 2017, with 12 more joining in 2018 again supported by the Scarborough Pledge Project.

Technical report:

Infant Language Link

The critical relationship between language and learning is well documented (Goswami & Bryant, 2007). Children with language impairments are at greater risk of developing literacy difficulties (Dockerall et al, 2007). Language, in particular, vocabulary skills at school entry, provide a powerful predictor of later academic achievement (Snowling et al, 2011, Roulestone et al, 2011, Lee, J., 2011, Block & Mangieri, 2006).

The prevalence of language difficulties in pupil aged between 4-5 years is generally reported to be between 2% and 19% (Law et al, 2000). This figure is generally regarded as much higher for pupils from socially deprived background. Teachers are under increasing pressure to both identify and support pupils with SLCN as early as possible at a time when access to specialist support is threatened.

Infant Language Link is an assessment and intervention package devised by Speech and Language Therapists and used by over 2,600 mainstream schools. The online standardised assessment is used to identify developmental difficulties with understanding of spoken language in children aged 4 - 8 years old. It is also suitable for those new to English and will identify gaps in their understanding.

The assessment will highlight any pupils who need to be seen by Speech and Language Therapists. The package suggests interventions at universal and targeted levels through use of strategies, planned language groups and 1:1 activities. The website provides information about a wide variety of speech and language issues with advice on how best to develop language skills to support literacy and boost attainment.

The Infant Language Link Assessment

The Infant Language Link assessment is delivered online. It consists of 64 items presented across 8 sub-tests: Concepts, Verb Tenses, Instructions, Pronouns, Negatives, Questions, Verbal Reasoning and Association.

Pupils are presented with a choice of 3 or 4 pictures and a recorded verbal prompt. The distracter pictures vary in syntactic or semantic elements. The test takes about 25 minutes to administer. All pictures and probes were reviewed by an expert panel for their suitability and relevance for the age group of the children concerned. Particular care was taken with selection of familiar scenarios, vocabulary and cultural relevance.

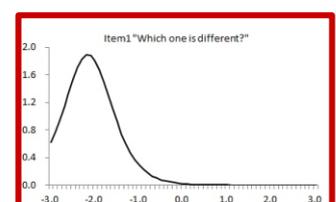
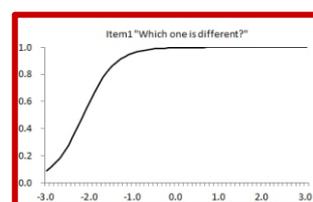
Scores are reported as a total score and section scores. Standard scores and percentile ranks are presented for the total score. Students are flagged for support at different levels'. The assessments used as a universal screen at school entry and then to track any identified pupils across KSI.

Sub-test	Description
Concepts	Tests the understanding of simple concept vocabulary
Verb Tenses	Tests the understanding of simple past and present verb forms
Instructions	Tests the understanding of sentences involving simple concepts and sequences
Pronouns	Tests the understanding of simple personal pronouns
Negatives	Tests the understanding of early negatives forms
Questions	Tests the understanding of basic questions words
Verbal Reasoning	Tests the understanding of simple cause and effect relationships and why questions
Association	Tests the ability to make links between vocabulary items

Selection of test items

Infant Language Link comprises of two equated assessments; Reception and Infant. The Reception test was based on a previous criterion referenced test with some additional test items. Data were available from 35,000 pupils aged between 4:00 and 5:06 years for this test. The Infant test shares many items with the Reception test with the addition of some more challenging questions.

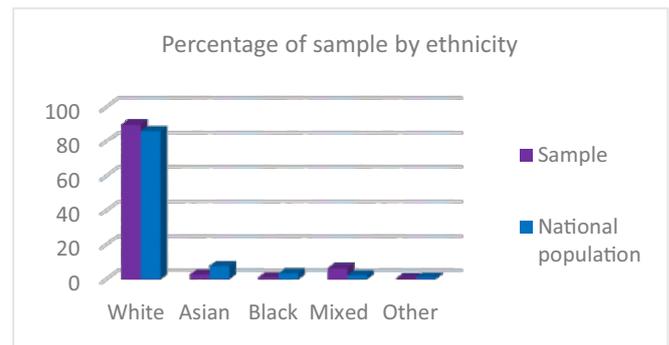
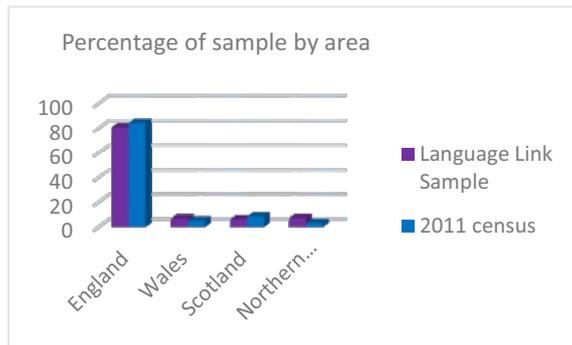
Two small scale pilots were carried out to select the final items. Selection was based on a number of criteria: the pass rate, the bi-serial correlation coefficient, the item response function, the item information function, the item category response line, the correlation between the item and the total test score, the discrimination parameter, the difficulty parameter and feedback from testers.



Example Item Response Function and Information Function graphs

Standardisation study

In total 33, 002 pupils aged between 4:0 and 8:06 years, from 1062 schools made up the standardisation sample. 51% were male and 49% were female.



Reliability

To observe internal consistency for raw score calibration, Cronbach's alpha was calculated for the Infant Language Link test as 0.898, indicating a high consistency within the test.

To establish test-retest reliability all schools within the standardisation sample were asked to retest a small number of pupils. In total 41 pupils from 130 schools completed initial and retests. Pearson correlations between the raw score achieved on the first test and the retest were high across all age bands (0.89) indicating good test retest reliability.

Age Band	Initial Mean (SD)	Retest Mean (SD)	Pearson's R
4:00 - 5:11	40.5 (9.55)	43.8 (9.03)	0.96
6:00 - 8:04	43.2 (6.97)	46.1 (8.56)	0.83
All ages	42.1 (8.14)	45.1 (8.72)	0.89

Validity

Concurrent validity was investigated by comparing scores on Infant Language Link with their scores on sub-tests from widely used standardised language assessments. In total 142 pupils from 9 schools were involved in the concurrent validity study. The correlation coefficients indicate that the Infant Language Link assessment provides sufficient and discriminant validity (CELF C&I 0.685, TROG 0.759).

Age Band	CELF 4 UK C&FD Scaled score (SD)	Preschool CELF-2 C&FD Scaled score (SD)	TROG Scaled score (SD)	Infant Language Link Raw score (SD)
4:00 - 4:11	N/A	9.5 (2.06)	91.3(12.07)	35.7 (6.81)
5:00 - 5:11	7.7 (3.54)	N/A	86.4 (15.1)	41.8 (8.14)
6:00 - 6:11	5.6 (3.69)	N/A	80.1 (21.44)	44.0 (8.83)
7:00 - 7:11	8.1 (3.98)	N/A	87.7 (19.8)	48.7 (6.69)
8:00 +	7.6 (3.77)	N/A	81.5 (18.8)	48.7 (6.69)
All ages	7.1 (3.80)	9.5 (2.06)	86.0 (17.88)	42 (9.02)
Correlation	0.685	0.585	0.759	1.00

References

- Bishop, D. (2003)** Test for the Reception of Grammar; version 2. Sidcup: Psychological Corporation
- Block, C. Collins & Mangieri, J (2006)** Vocabulary in all classrooms (4th edition) Boston: Allyn and Bacon
- Dockerall, J., Lindsay, G., Mackie, C. & Connolly, V. (2007)** Constraints in the production of written text in children with specific language impairments. *Exceptional Children* 73, 147-164.
- Goswami, U. & Bryany, P. (2007)** Children's cognitive development and learning (Primary Review research survey2/1a) Cambridge: University of Cambridge Faculty of Education.
- Law, J., Boyle, J., Harris, F., Harkness, A. & Nye, C. (2000)** Prevalence and natural history of primary speech and language delay: Finding from a systematic review of the literature. *International Journal of Language and Communication Disorders*, 35(2), 165-188
- Lee, J. (2011)** Size matters: Early vocabulary as a predictor of language and literacy competence. *Applied Linguistics* 32(1), 69-92.
- Roulstone, S., Law, J., Rush, R., Clegg, J. & Peters, T. (2011)** The role of language in children's early education outcomes. *Research brief DFE-RB 134*
- Snowling, M. J., Hulme, C. Bailey, A. M., Stothard, S.E. & Lindsay, G (2011)** Better Communication Research Project: language and literacy attainment of pupils during early years through Ks2: Does teacher assessment at five provide a valid measure of children's current and future educational attainments? London: DFE-RR172a
- Wiig, E., Secord, W. & Semel, E. (2001)** CELF-Preschool UK: Clinical Evaluation of Language Fundamentals Preschool UK Edition. Sidcup: Psychological Corporation
- Wiig, E., Secord, W. & Semel, E. (2006)** CELF-4 UK: Clinical Evaluation of Language Fundamentals Fourth UK Edition. Sidcup: Psychological Corporation