Research Report DFE-RR247- BCRP8

Department for Education

Developing a communication supporting classrooms observation tool

Ioanna Bakopoulou, Julie E. Dockrell, James Law, Geoff Lindsay & Sarah Spencer

Psychology and Human Development, Institute of Education, University of London, CEDAR, University of Warwick, Speech and Language Sciences, Newcastle University & Human Communication Sciences, University of Sheffield

This research report was commissioned before the new UK Government took office on 11 May 2010. As a result the content may not reflect current Government policy and may make reference to the Department for Children, Schools and Families (DCSF) which has now been replaced by the Department for Education (DfE).

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.

CONTENTS

ACKNOWLEDGEMENTS

Thanks are extended to the expert advisory group that provided feedback on the observation tool and to the head teachers and teachers that undertook the pilot study.

EXECUTIVE SUMMARY

The Better Communication Research Programme (BCRP) was commissioned as part of the Better Communication Action Plan[1], the government's response to the Bercow review of services for children and young people with speech, language and communication needs[2]. This had recommended a programme of research 'to enhance the evidence base and inform delivery of better outcomes for children and young people' (p.50). This is one of 10 publications reporting the results from individual BCRP projects. These contribute to a series of four thematic reports and the main report on the BCRP overall in which we integrate findings and present implications for practice, research and policy from the BCRP as a whole (see Appendix 1 for full details[3]).

This study comprised the development of a Communication Supporting Classrooms Observation Tool (CsC Observation Tool) for Reception and Key Stage 1 classrooms. This was devised following a review of the research literature.

What we did

- The evidence derived from 62 papers was rated based on the studies' research design following specific rating criteria.

- Based on the review of the literature and rating of the evidence, three main areas were considered important and were included as dimensions in the CsC Observation Tool:
    - *Language Learning Environment – the physical environment and learning context*
    - *Language Learning Opportunities – the structured opportunities to support children's language development*
    - *Language Learning Interactions – the ways in which adults in the setting talk with children*
- The CsC Observation Tool was piloted in 15 schools in Reception, Year 1 and Year 2 classrooms and data were gathered in 9 of them to establish inter-rater reliability, both per item as well as a profile of the language learning environment. Thirteen classroom

[1] https://www.education.gov.uk/publications/eOrderingDownload/Better_Communication.pdf
[2] Bercow, J. (2008). *The Bercow Report: A review of services for children and young people (0-19) with speech, language and communication needs.* Nottingham: DCSF. https://www.education.gov.uk/publications/eOrderingDownload/Bercow-Report.pdf
[3] Reports are accessible through the DfE's research site http://www.education.gov.uk/researchandstatistics/research

observations were conducted by the research team in these 9 settings and revealed that inter-rater reliability for the CsC Observation Tool was consistently high for the three dimensions.

- The main study involved a feasibility study to gain a picture of language environments across a range of different primary schools in different local authorities in Reception and Key Stage 1 classes and to investigate the possible uses of the CsC Observation Tool. A hundred and one different classrooms in 39 different schools across the North and South East of England were visited. The schools were drawn from 10 different local authorities and we observed lessons in 38 Reception classes, 35 Year One classes and 28 Year Two classes.
- A case study was carried out with one speech and language therapy service in order to examine the usefulness of the CsC Framework and Observation Tool as a means of in-service training.

What we found

- Significant differences were found across the three dimensions of the CsC Observation Tool. Overall, a large number of the classrooms observed scored high on the *Language Learning Environment* dimension but scores for the *Language Learning Opportunities* and *Language Learning Interactions* were lower. For all year groups,
    - scores for the *Language Learning Environment* dimension were significantly higher than scores for *Language Learning Interactions* and
    - scores for the *Language Learning Interactions* dimension were significantly higher than those for the dimension of *Language Learning Opportunities*.
- There were no significant differences across the three year groups for the dimensions of *Language Learning Opportunities* and *Language Learning Interactions*; however, the *Language Learning Environment* scores differed significantly across the year groups with the Year 2 mean score being significantly lower than the mean for Reception classes.
- A comparison of suburban or rural (N = 30) and urban (N = 70) classrooms showed a statistically significant difference for the dimension of *Language Learning Opportunities*, where classes in urban settings scored lower on this dimension.
- Analysis of the *Language Learning Opportunities* dimension revealed that small group work facilitated by adults occurred significantly more often and interactive book reading occurred significantly less often than all other language learning opportunities, with no significant difference between year groups.

- Analysis of the *Language Learning Interactions* dimension revealed that a number of interaction behaviours occurred regularly across the observation time (using children's names, using natural gestures, confirming, imitating, using open questioning, pacing and pausing) and certain behaviours were much less frequent (extending, modelling, encouraging use of new words, using contrasts, supporting listening skills, encouraging turn taking, scripting, praising non-verbal communication, providing clear language choices).
- The feasibility of the use of the CsC Observation Tool by practitioners was considered by carrying out observations collaboratively with practitioners, including SENCOs, speech and language therapists and teachers. In all cases, the practitioners found the tool very helpful, accessible, easy to use and, with guidance, reliable in the recording of classroom features supporting communication.
- The study provided evidence for using the CsC Observation Tool:
    - In schools
    - To support training
    - To identify Local Authority INSET training

Implications for future practice, research and policy

- Good classroom organisation to maximise language development needs to be complemented by the fine tuning of oral language interactions by staff
- Activities to scaffold language development need to be provided in a regular and deliberate manner. These experiences should include more advanced language learning interactions that have been shown to develop oral language, including grammatical skills, vocabulary and narrative. Together, these techniques constitute high-quality verbal input by adults.
- All school staff should fully understand, appreciate and develop quality use of these language learning interaction techniques.
- The CsC Observation Tool and the Framework which underpins it provide professionals with a flexible way of developing their teaching skills to support oral language.
- Future work should consider using the tool to
    - Evaluate interventions at classroom level
    - Consider the opportunities afforded to children with less well developed language
    - Examine the impact of wider continued professional development

1. INTRODUCTION

1.1 Aims and Objectives

The Better Communication Research Programme (BCRP) was commissioned as part of the Better Communication Action Plan[4], the government's response to the Bercow review of services for children and young people with speech, language and communication needs[5]. This had recommended a programme of research 'to enhance the evidence base and inform delivery of better outcomes for children and young people' (p.50). This is one of 10 publications reporting the results from individual BCRP projects. These contribute to a series of four thematic reports and the main report on the BCRP overall in which we integrate findings and present implications for practice, research and policy from the BCRP as a whole (see Appendix 1 for full details[6]).

The 'Developing a Communication Supporting Classrooms Observation Tool' study is one part of the BCRP. Its aim was to develop a tool to profile features of communication supporting classrooms in Reception and Key Stage 1, pilot its feasibility in classrooms and examine the flexibility and efficacy of its' use by practitioners. The identification of the features to be included in the tool was derived from a comprehensive review of the relevant research literature to ensure that the components of the tool were informed by evidence. The study had four objectives:

1. To review the evidence base underpinning features reported to support the development of oral language in classroom contexts;
2. To identify key features from the review and develop these into a "Communication Supporting Classrooms (CsC) Framework", an observational tool designed to profile classroom environments and learning spaces;
3. To examine the extent to which it was possible to profile schools that provided different communication environments;
4. To consider the ways in which the tool could be used to support professional development within and across schools.

---

[4] https://www.education.gov.uk/publications/eOrderingDownload/Better_Communication.pdf

[5] Bercow, J. (2008). *The Bercow Report: A review of services for children and young people (0-19) with speech, language and communication needs.* Nottingham: DCSF. https://www.education.gov.uk/publications/eOrderingDownload/Bercow-Report.pdf

[6] Reports are accessible through the DfE's research site http://www.education.gov.uk/researchandstatistics/research

The findings from the present project, together with those from other BCRP projects, contribute to both a series of thematic reports and the main report on the BCRP overall. In these we integrate findings and present implications for practice, research and policy from the BCRP as a whole.

1.2 Background

The importance of fostering good oral language skills in educational contexts is well established. Oral language skills are the cornerstone of literacy skills, both reading and writing (National Reading Panel Report, 2000; Shanahan, 2006). Moreover certain kinds of talking such as discussing, collaborating and problem solving help children with academic subjects (Resnick, Michaels & O'Connor, 2010). Establishing effective language learning environments (environments where highly focused everyday personalised and interactive teaching takes place) can provide both support for literacy (Snowling & Hulme, 2011) and the basis for managing talk to enhance learning (Resnick et al., 2010). Providing effective oral language environments which foster good communication skills is challenging, requiring practitioners who understand the ways in which children develop their receptive and expressive language skills and are able to support their development in the classroom context. Once effective classrooms for oral language are in place schools are in a stronger position to become effective oral language environments.

1.3 Effective Oral Language Environments

Both the number of children identified with Speech, Language and Communication Needs (SLCN) and the association between social disadvantage and poor language skills have increased the demand on services, calling for a re-examination of the ways in which speech, language and communication are supported for children across health and education services (Bercow, 2008; Boyle, McCartney, Forbes & O'Hare, 2007; Lindsay, Desforges, Dockrell, Law, Peacey & Beecham, 2008; Lindsay, Desforges, Dockrell, Law & Peacey, 2010). Although many children with difficulties continue to receive individual assessment and intervention from speech and language therapists and language specialists in schools, there has been a move towards increasing the "communication friendliness" of schools to provide effective language learning environments (Crosskey & Vance, 2011) and, thus, it is argued, to support both the development of children's oracy skills and their access to the curriculum.

The term “Communication Friendly” was developed as a result of similar initiatives being implemented for other groups of children with special educational needs e.g. dyslexia and dyspraxia (Coffield & O’Neill, 2004). Typically, changes towards a ‘communication friendly environment’ reflect alterations to the school environment and ethos and include developing strategic approaches to raise knowledge and awareness of SLCN in all staff. Both the children’s communication charity ICAN (www.ican.org.uk) and the Communication Trust (www.thecommunicationtrust.org.uk) have created guidance in providing “communication friendly environments”. ICAN has derived, from a range of sources, general strategies that can be used to support schools become “Communication Friendly”. These include:

1. An audit of the environment (www.ican.org.uk/talkingpoint, Primary National Strategy: Speaking, Listening, Learning).

2. Improving knowledge of language development, the language skills of individuals and the language demands of the environment (Martin & Miller, 1999).

3. Adapting adult language so that it is not a barrier to learning.

4. Facilitating communicative opportunities for children to interact appropriately with a range of individuals[7]

5. Creating an ethos where it is acceptable ‘not to know’ and teaching children how to monitor their own understanding.

6. Raising children’s awareness of their strengths and needs.

7. Careful planning and information sharing, particularly at times of transition.

These features include factors which reflect both good pedagogy and those which are more specific to oral language skills.

The Training and Development Agency for Schools (TDA) has also focused on key systemic changes that can support language and communication (Inclusion Development Program). TDA materials were collated from a range of different sources including work done by speech and language therapists (SLTs). SLTs have also developed guidance for schools and some of these have been embedded within school training. The BCRP project

[7] Howe & Mercer, 2007; Primary National Strategy: Speaking, Listening, Learning.

examining practice with respect to the implementation of interventions[8,9] explored practice with senior SLTs and educational psychologists (EPs) in 14 English local authorities and primary care trusts. The study identified 158 different interventions used by therapy services including training materials and packages, such as 'Speech and Language School Resource Folders' or 'Communication Friendly Environment Training' provided to schools to develop staff knowledge, attitudes and behaviours. These materials demonstrated that speech and language therapy services were responding creatively to the needs of their population. However, it was difficult to ascertain the evidence base underpinning the features identified, the criteria used to include the features or the ways in which schools could monitor language opportunities and adult-child interactions which happened in the classroom context for all learners to ensure an effective language learning environment. As such, there is a need for a tool which allows staff to profile the language learning environment and the tool needs to be transparent in terms of the evidence base which has informed the elements included within it.

Creating *effective* language learning environments has two potential benefits. First, it prepares children for the more challenging demands placed on oracy as they proceed through school. Second, if classroom environments can offer effective language learning opportunities, the numbers of children currently identified with speech, language and communication difficulties should reduce and those pupils that continue to experience difficulties will be those with specific needs and require the support of specialist services. Effective language learning environments should enhance the speaking and listening skills of all children. A tool which allows staff to profile the classroom language environment has the potential to identify current practice and inform the ways in which classroom talk can be further developed to support thinking and learning.

1.4 Supporting Oral Language

Communication supporting classroom environments emphasise children's acquisition of language through their interactions with both peers and adults. An emphasis on social interaction as a route to language gains is consistent with a social-interactionist developmental perspective. The social-interactionist developmental perspective views

[8] Roulstone, Bakopoulou, Wren, & Lindsay (2012). *Exploring interventions for children and young people with speech, language and communication needs: A study of practice. Research report .* London: DfE.

[9] Roulstone, Wren, Bakopoulou, & Lindsay, (in press). Exploring educational and speech and language therapy interventions for children with speech, language and communication needs. *Child Language Teaching and Therapy.*

language acquisition as a process where both child specific factors and 'frequent, relatively well-tuned affectively positive verbal interactions' are considered critical for supporting language growth (Chapman, 2000, pg. 43). This perspective emphasises the importance of socially embedded, deliberately mediated interactions with more knowledgeable conversational partners as a critical developmental mechanism for children (Justice & Ezell, 1999; Justice & Kaderavek, 2002). Within such interactions, the more knowledgeable partner, such as the teacher, fine-tunes their verbal input to scaffold the child's communication thereby ensuring further engagement and a gradual move towards more independent levels of using and understanding language.

Research has indicated that variations in the quality and quantity of the language that children experience in their homes (Baumwell, Tamis-LeMonda & Bornstein, 1997; Hoff, 2003; Landry, Miller-Loncar, Smith & Swank, 1997) and educational environments (Girolametto & Weitzman, 2002) partially account for individual differences in the rate of children's language growth and later language outcomes. Adults in educational settings play a key role in supporting oral language and the development of a classroom learning environment which fosters language for thinking and learning.

1.5 Why Communication Supporting Classrooms?

The main focus of the Communication Supporting Classrooms Observation Tool (CsC Observation Tool) is to capture what is happening in the classroom in real time; observations of the classroom are made and are then used to profile the language learning classroom environment. The CsC Observation Tool does not focus on the whole-school environment, liaison with other professionals or staff training. As we have outlined in Section 1.3, there are other measures which have been devised to address these aspects of the oral language environment in schools. In contrast, the CsC Observation Tool was designed to be sensitive to the key elements in the activities within classrooms that support oral language growth. Our aim was to create a tool that identified key classroom features related to oral language development and that supports school staff to monitor the opportunities children have for language learning, and the adult-child interactions which take place in their own classroom. By doing so, the CsC Observation Tool provides a flexible measure to support school staff in developing their practices, targeting areas for specific action in relation to the school population and identifying needs for further training. It was anticipated that the tool use would be individually tailored within and across schools reflecting the needs and strengths of school staff and children.

2. WHAT WE HAVE DONE

2.1 Literature Review and Rating the Evidence Base

2.1.1 Features of the Literature Review

Relevant published outputs related to supporting oral language were reviewed. This allowed for the identification of features in the classroom and ways of talking with children which had been demonstrated to support the development of oral language skills. A three-stage review model was used in order to identify the relevant literature. A set of inclusionary criteria were developed (see Section 2.1.2 below) in order to focus the search, identify studies which were reliable and valid and capture initiatives within the UK.

The first stage consisted of identifying studies that met the review inclusion criteria. The second stage consisted of in-depth review of the selected studies in order to identify key elements and processes involved in classroom environments which enhance language development. These features were then used to develop the *Communication Supporting Classrooms Observation Tool.* To contextualise the tool within current practice, we also identified elements of supportive oral language practice highlighted in Ofsted reports, Government documentation and policy documents related to SLCN. At the final stage, the studies used to develop the *Communication Supporting Classrooms Observation Tool* were rated on a three point scale to indicate the strength of the studies. Studies and their relative ratings can be found in Appendix 1.

2.1.2 Identifying and Describing Studies

Defining relevant studies: Inclusion criteria

The search strategy identified a selection of abstracts, which were then subject to a screening process of exclusion and inclusion criteria. This narrowed the focus of the studies and ensured that only papers relevant to the aims of the project and the target population were reviewed. The literature reviewed was from a range of sources including empirical and evidence-based studies, review of empirical studies, Ofsted reports, Government documentations and policy documents related to SLCN. All items in the final scale were supported by an evidence base as listed in 2.1.1.

The following inclusion criteria were developed:

Inclusion criteria

INCLUDE 1. The study specifically examined elements that support oral language development, including both receptive and expressive language

INCLUDE 2. The mean age group of the participants in the study was between two and twelve years or the documentation referred to early years and primary school settings
INCLUDE 3. The paper was an empirical study, a review of empirical studies, Government documentation, policy or documentation related to SLCN
INCLUDE 4. Published in English language
INCLUDE 5. Published and within the public domain after 1984

2.1.3 Rating the Evidence Base

The evidence derived from 62 papers was rated based on the studies' research questions and design. Studies were included if they had sufficient power (sample size) to draw reliable conclusions, appropriate designs to identify change or causality and were peer reviewed. The criteria used for the three scale rating were:
STRONG: Randomised intervention studies; quasi-experimental intervention studies measuring targeted and non-targeted variables; Population studies monitoring progress and identifying factors which predicted progress.

MODERATE: Quasi-experimental intervention studies where only targeted language variables were measured; reviews of empirical studies, typically as book chapters which reviewed a minimum of 10 studies and provided details of the studies reviewed.

INDICATIVE: Single studies without matched comparisons or non-targeted measures.

OTHER: Government documentation or policies; SLCN frameworks; SLCN documentation; elements/Items contained in a standardised rating scale derived from empirical sources and influencing current practice.

Appendix 1 gives details of the evidence rating. Twenty-two papers met the rating criteria for a strong research design, 27 papers for moderate and 5 for indicative. Finally, 8 papers were included as important SLCN documentation or Government policy related to SLCN.

The review of the literature and rating of the evidence identified three main factors that support communication in the classroom. These factors were classified as following: the classroom environment, the learning opportunities and the adult-child interactions which occurred in the classroom settings. Key features within the classroom's physical environment and learning context provide an important infrastructure to enable the quality and quantity of children's oral language experiences (Roskos & Neuman, 2002). In communication supporting environments, the physical environment provides support for facilitating children's exposure to diverse aspects of language, and consideration of the

organization of space and provision of materials were highlighted in the literature as important for maximising language richness. Henceforth these items are considered within the first dimension of the Communication Supporting Classrooms Observation Tool named '*Language Learning Environment'*.

The research evidence also pointed to the importance of particular opportunities that children have throughout the day to learn and practise their language skills. These opportunities characterise a communication supporting environment and include small group work, interactive book reading and structured opportunities for high-quality verbal input among peers and adults. Henceforth these items are considered within the second dimension of the tool named '*Language Learning Opportunities'.*

The *environment* and *opportunities* may be necessary aspects of the communication supporting classroom but they are not sufficient. Exposure to particular types of oral language exchanges and opportunities to practise and use oral language in interaction with others are associated with robust language gains by children. Specifically the quality of child-adult interactions was identified as a significant factor in the development of children's oral language skills. Adult-child verbal interactions which are characterised by high levels of adult responsiveness have been shown to be specific supports of children's oral language development. The adults' role (both class teachers' and support staff's role) is thus central within the classroom environment and involves frequently and consistently responding to a child's communicative acts in a way that is sensitive to the child's developing oracy skills. Henceforth these items are considered within the third dimension of the tool named '*Language Learning Interactions'.*

2.2 Communication Supporting Classrooms Observation Tool Development

The *Communication Supporting Classrooms Observation Tool* (CsC Observation Tool) (see Appendix 2) was developed to profile dimensions within the classroom environments and learning spaces which support the development of oral language skills. It was designed to provide a record, at one point in time, of the opportunities afforded for children so that school staff could identify key elements, resources and practices that support communication within classroom. As such, it aims to provide the basis for highlighting effective practice and identifying areas where practice can be developed to enhance children's oral language skills. As both good classroom environments and effective pedagogy are seen as prerequisites for providing the appropriate context to support oral

language, the CsC Observation Tool includes elements which refer both to effective pedagogy, teaching and learning as well as language specific aspects.

The CsC Observation Tool is divided into three dimensions:

- *Language Learning Environment:* This dimension involves items related to the physical environment and learning context
- *Language Learning Opportunities:* This dimension involves items related to the structured opportunities that are present in the setting to support children's language development
- *Language Learning Interactions:* This dimension involves items related to the ways in which adults in the setting talk with children

A 'Guidance on Completing Communication Supporting Classrooms Observation Tool' document is provided with the CsC Observation Tool (see Appendix 3) which gives exemplars of the items and references to published outputs which support the inclusion of the specific items in the tool.

The target group for CsC Observation Tool was the initial stage of primary school (Reception, Year 1 and Year 2); however, given the breadth of the review and the nature of the items it was envisaged that the tool could also be used in early years settings[10]. As an observation tool, it was designed to be used during a regular classroom teaching session, usually during the literacy or numeracy lesson. The average length of time necessary to collect a representative sample of behaviour was established at one hour in the classroom with an additional 20 minutes prior to the observation period to become familiar with the classroom setting and available resources.

2.3 Interpreting the CsC Observation Tool Profile

The three dimensions of the CsC Observation Tool can be thought of as fulfilling different functions and need to be considered as capturing different dimensions and, perhaps, highlighting the need for collecting additional information. These functions will vary as a result of the nature of the items in the three dimensions and the representativeness of the observations.

[10] Research using the CsC Observation Tool in early years and nursery settings is currently being undertaken.

The *Language Learning Environment* dimension can be considered an audit of the classroom environment. This dimension lists what is available within the environment; many of the items are static and are, as the literature review has shown, the infrastructure to support language learning.

The *Language Learning Opportunities* dimension is indicative of the opportunities which are afforded in the classroom during the observation period, which for the feasibility study of this project typically included an observation of a literacy lesson. If, for example, no interactive book reading occurs (Item 2 of *Language Learning Opportunities* dimension), then it is important to consider with school staff whether this occurs at other times during the school day.

Finally, the *Language Learning Interactions* dimension should be considered as a profile of the ways in which language is used in the classroom. These ways include techniques used by adults to acknowledge the children's needs (such as getting down to the child's level, pacing language used, confirming contributions), to support them in developing their language skills (such as labelling, using appropriate open-ended questions), to encourage non-verbal communication (such as praising good listening skills), to direct language learning (such as commenting), and to model language responses (such as scripting). These interactions have been shown to support language learning and as such should be considered the backbone of teaching and learning throughout the day.

Classrooms are not expected to demonstrate all items in the dimensions all the time but the overall patterns offer opportunities for the development of practice. Where gaps are identified it is important to consider whether there are any reasons why these might not occur during the observation period or whether the gaps are typical of a more general approach to teaching and learning within that class or across the school. Patterns across classrooms and schools provide the basis for identifying features which are strengths and activities or techniques which require future training and development.

2.4 Pilot of Communication Supporting Classrooms Observation Tool

Prior to piloting, an expert advisory group was sent the CsC Observation Tool and provided feedback on the content and presentation of the tool. The advisory group included education staff, SLTs, experts from voluntary organisations and researchers. Their comments were taken into account to further refine the tool before piloting.

From March to May 2011, the two Senior Research Fellows of the CsC Project Team piloted the CsC Observation Tool. In the first phase of piloting, the aim was to test the CsC Observation Tool in a range of different schools in order to refine it as a measurement tool, consider issues related to its use and develop a guidance document that would facilitate education staff into using it. In the second phase of piloting, we examined issues of reliability of the CsC Observation Tool.

All schools were visited by the two Senior Research Fellows of the CsC Project Team. Observations took place in Reception and Year 1 classes during a morning session and lasted for two hours in each class. In each school, observations using the CsC Observation Tool were followed by discussions with the Special Needs Co-Ordinator in order to consider issues related to the use of the tool by school staff.

2.4.1 Selection of Settings

The schools involved in the second phase of the pilot were selected based on the following criteria:

a) Exclusionary criteria – we excluded any schools with associated language unit resources, specialised centre (e.g. ICAN), Dyslexia friendly schools or schools under special measures (Ofsted).
b) We also excluded any schools which had higher than national average educational attainments or number of children on the SEN register.

Fifteen schools were visited in the second phase of the study, and data were also gathered in nine of them to establish inter-rater reliability for each dimension of the CsC Observation Tool both per item as well as a profile of the language learning environment.

2.4.2 Reliability of the CsC Observation Tool

Thirteen classroom observations were conducted in these 9 settings by the CsC team and revealed that inter-rater reliability for the CsC Observation Tool was consistently high, with greater than 83% agreement between raters for the dimension of the *Language Learning Environment* being achieved for 12 of the 13 observations. This was also the case for the presence of *Language Learning Opportunities,* where agreement between raters was higher than 71% for 11 of the 13 observations, and *Language Learning Interactions,* where agreement between raters was higher than 84% for 12 of the 13 observations. Reliability for the frequency of *Language Learning Opportunities* and the frequency of *Language Learning Interactions was* examined for 11 observations completed by staff familiar with the tool. Reliability ranged from 71.4% to 100% for *Language Learning Opportunities* and between

75% and 100% for *Language Learning Interactions* indicating that the tool was sensitive to both the occurrence of particular opportunities and interactions and the frequency of their occurrence during the observation period. Following the second phase of the pilot, and prior to the main feasibility study, final amendments of the CsC Observation Tool were made to enhance reliability of the language learning interactions scale and modify items which were unclear.

3. WHAT WE HAVE FOUND – THE FEASIBILITY STUDY

To trial the use of the CsC Observation Tool, 101 different classrooms in 39 different schools across the North and South East of England were observed. The schools were drawn from 10 different local authorities and we sampled Reception classes (N = 38), Year 1 classes (N = 35) and Year 2 classes (N = 28). Details of the schools visited can be found in Appendix 4 and raw scores for each dimension and item can be found in the Appendix 5. In this section we focus on:

1. Patterns across the three dimensions – *Environment, Opportunities* and *Interactions*
2. Profiles of performance across *Opportunities* and *Interactions*
3. Potential uses of the CsC Observation Tool

3.1 Patterns of Performance across the *Environment*, *Opportunities* and *Interactions*

Each dimension of the CsC Observation Tool, developed based on the research evidence (see Section 3), resulted in different total numbers of scores (Language Learning Environment = 19, Language Learning Opportunities = 25, Language Learning Interactions = 100). To account for the different numbers of items across the three dimensions, proportion scores were created. Proportion scores were derived by dividing the actual number of observations by the total number of possible observations. These proportion scores range from 0 (not recorded) to 1 (maximum possible numbers of occurrences), where items were rated on the basis of a maximum of five occurrences.

We first examine scores across the three dimensions - *Environment, Opportunities* and *Interactions* – and then differences across the three year groups (Reception, Year One and Year Two) and location are explored. Finally in this section we consider differences on the items of the *Language Learning Opportunities* and *Language Learning Interactions* dimensions.

Figure 3.1 presents the mean proportion scores and their standard deviations (SDs) for the dimensions of *Language Learning Environment*, *Language Learning Opportunities* and *Language Learning Interactions*. As Figure 3.1 shows, there were significant differences across the three dimensions. Overall, a large number of the classrooms observed scored high on the *Language Learning Environment* dimension but scores for *Language Learning Opportunities* and *Language Learning Interactions* were lower. A repeated measures

ANOVA across the dimensions with year group as the between group factor revealed a significant effect of dimension (F (2, 196) = 254.37, p < .001, ηp^2 = .81), but no interaction by year group (F (4, 196) = 1.90, *ns*). For all year groups, scores for the *Language Learning Environment* dimension were significantly higher than scores for *Language Learning Interactions* (p < .001) and scores for *Language Learning Interactions* were significantly higher than those for *Language Learning Opportunities* (p < .001).

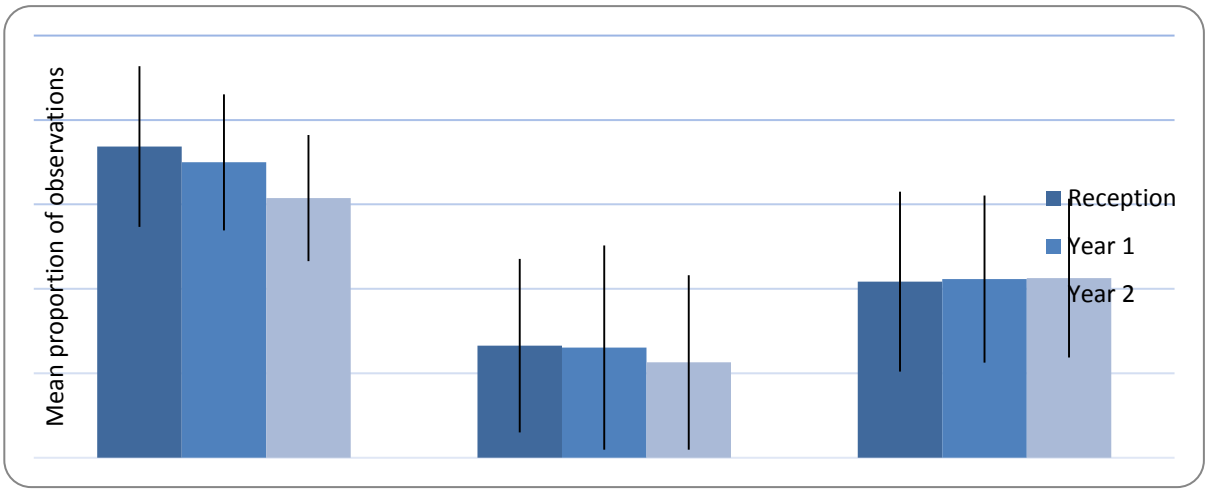

Figure 3.1: Mean (+/- SD) Proportion Score for CsC Observation Tool Dimensions for the Three Year Groups

Three ANOVAs were computed to examine year group differences for each of the three dimensions. There were no significant differences across the three year groups for *Language Learning Opportunities* (F(2, 100) = .30, *ns*) or *Language Learning Interactions* (F(2, 100) = .12, *ns*); however, the *Language Learning Environment* proportion score differed significantly across the year groups (F(2, 100) = 4.25, p = .017, ηp^2 = .08). The Year 2 mean was significantly lower than the mean for Reception classes but did not differ significantly from Year 1 mean score (Year 2 M = 0.62, SD = 0.15; Year 1 M = 0.70, SD = 0.16; Reception M = 0.74 SD = 0.19). This result suggests that the majority of Reception classrooms put an emphasis on modifying the language environment in a way that supports oral language development, an emphasis that is not sustained later in the Year 2 classrooms we observed. These differences may reflect the classrooms sampled, aspects of teaching and learning in Year 2 or different assessment targets.

Furthermore, we examined whether suburban and urban classrooms differed in their profiles. Seventy schools were located in cities and 30 in more suburban or rural areas. Means (SDs) of the urban and suburban schools are presented in Figure 3.2 . A series of *t*-tests showed a statistically significant difference for the dimension of *Language Learning*

Opportunities (*t* (98) = -3.44, *p* = .001), where classes in urban settings were scoring lower on this dimension. There were no significant differences for *Language Learning Environment* or *Language Learning Interactions* (LLE *t* (98) = 0.51, *ns*; LLI *t* (98) = -.39, *ns*).

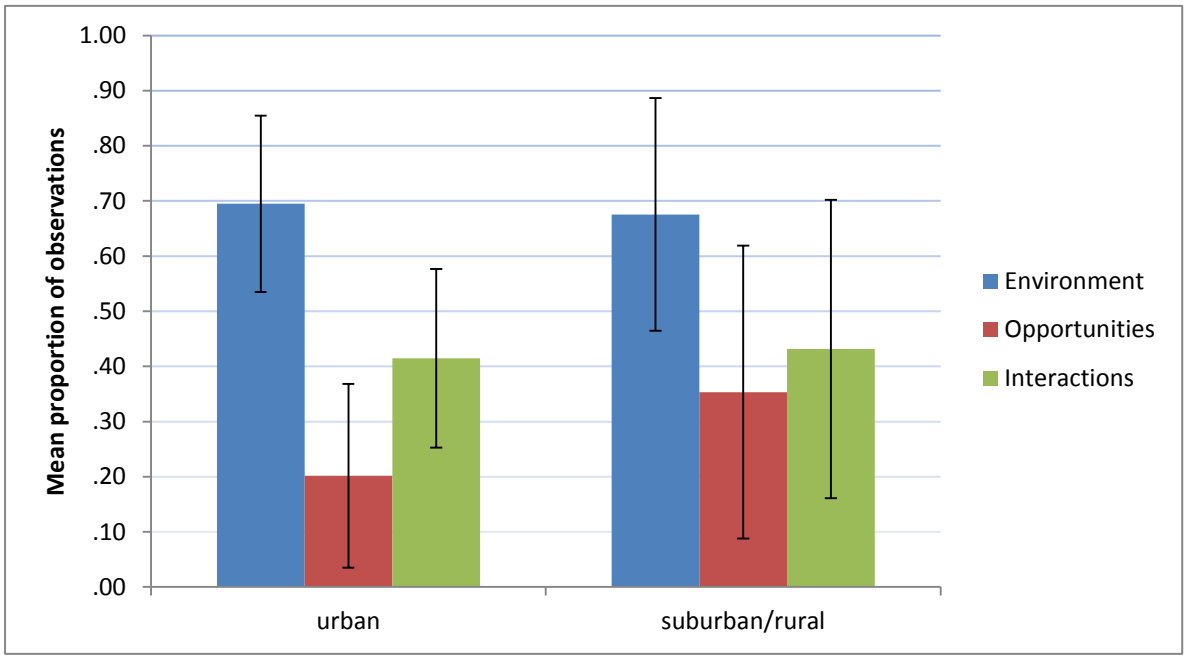

Figure 3.2: Mean (+/- SD) Proportion Score for CsC Observation Tool Dimensions for Urban and Suburban Classrooms

We examined the five items which comprised the language learning opportunities to see whether there were differences across items. All five items showed the same pattern with urban environments scoring lowerer than the suburban/rural areas.

3.2 Profiles of Performance across *Opportunities* and *Interactions*

As we have shown in the section above, the settings observed typically included many of the key environmental features which have been shown to support language learning. These reflected structural features of the classroom such as signage or strategies used by the teacher to manage transitions or noise levels and use of high quality play and learning materials. The high scores on the *Language Learning Environment* dimension indicate the basic structural elements to support language learning were, on the whole, present. In contrast we found less evidence of *Language Learning Opportunities* and *Language Learning Interactions.*

3.2.1 Language Learning Opportunities

Overall, comparisons of the three dimensions indicated that structured language learning opportunities were observed least frequently but, as noted in 2.3, these differences may reflect different ways children may experience these opportunities. We considered whether this was a feature of all the opportunities identified or whether it reflected the presence/absence of specific opportunities. Means (*SD*) for *Language Learning Opportunities* by year group are presented in Figure 3.3.

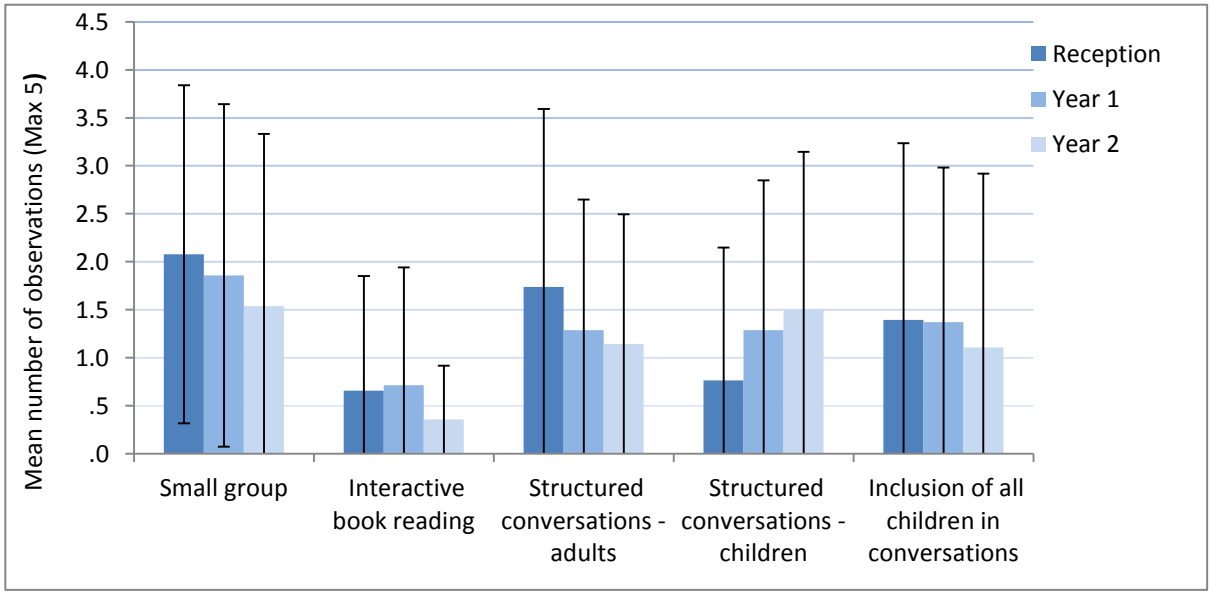

Figure 3.3: Mean (+/- SD) of Observations (max = 5) for Language Learning Opportunities for the Three Year Groups

A repeated measures ANOVA compared the five items of the *Language Learning Opportunities* dimension across the three year groups. There was a significant effect of the type of language learning opportunities ($F(4, 392) = 13.07$, $p < .001$, $\eta p^2 = .12$), no significant effect of year group ($F(1, 98) = .30$, *ns*) and no interaction between type of language learning opportunity and year group ($F(8, 392) = 1.74$, *ns*). Post hoc tests revealed that small group work facilitated by adults occurred significantly more often than all other language learning opportunities (interactive book reading p <.001, inclusion of all children in small group work p <.001, structured conversations with peers p <.001, and structured conversations with adults p =.03). Interactive book reading occurred significantly less often than all of the other language learning opportunities (all *ps* <.001). Structured conversations with adults, structured conversations with peers and the inclusion of all children in small group work did not differ significantly from each other. Thus, while group work facilitated by adults featured across many of setttings, there was less evidence of

other specific structured activities to support language learning. However, it is important to note that there are large standard deviations for 'small group worked facilitated by an adult' such that in some classes these opportunities did not occur during the observation period.

3.2.2 Language Learning Interactions

Twenty items had been identified for inclusion in the *Language Learning Interactions* dimension of the CsC Observation Tool. All occurrences of each item were scored up to a maximum of five observation points. Means (*SD*) for the items by year group in descending order of occurrence are presented in Table 3.1. As Table 3.1 shows, there were a number of interaction behaviours which occurred regularly across the observation time. These included using children's names, supporting oral language with natural gestures, confirming children's oral language contributions and repeating more or less exactly what children have said. In contrast, certain interaction behaviours were much less frequent. Less frequently recorded interaction behaviours (defined as interaction behaviours observed less than an average of one occurrence during the observation period) included encouraging turn taking, oral scripting of activities, praising non-verbal communication and providing clear language choices.

Table 3.1 Means (*SD*) of Language Learning Interactions by Year Group in Descending Order of Occurrence (Max Recorded Occurrences = 5)

Items	Reception (*n* = 38)	Year 1 (*n* = 35)	Year 2 (*n* = 28)	Total across Year Groups
Using children's names	3.8 (1.6)	4.4 (1.1)	4.2 (1.3)	4.1 (1.4)
Using natural gestures	3.4 (1.9)	3.3 (2.4)	3.3 (1.9)	3.3 (2.0)
Confirming oral language initiations	3.4 (1.9)	3.2 (1.8)	3.1 (2.0)	3.3 (1.9)
Imitating child's language	3.3 (1.8)	2.9 (1.6)	2.9 (2.0)	3.1 (1.8)
Using open questioning	2.9 (1.8)	2.9 (2.0)	3.3 (1.9)	3.0 (1.9)
Pacing oral language	2.9 (1.9)	2.8 (1.9)	2.7 (2.0)	2.8 (1.9)
Pausing to allow responses	2.6 (2.0)	2.8 (1.9)	2.6 (1.9)	2.7 (1.9)
Commenting on activities	3.1 (1.7)	2.6 (1.7)	2.3 (1.3)	2.7 (1.6)
Getting down to child's level	2.9 (1.9)	2.4 (1.9)	2.4 (2.0)	2.6 (1.9)
Labels items/actions	2.3 (1.8)	2.1 (1.7)	2.7 (1.9)	2.3 (1.8)
Using symbols to reinforce language	2.1 (1.7)	2.0 (1.9)	1.9 (1.7)	2.0 (1.8)
Extending children's language	1.5 (1.8)	1.8 (1.5)	1.9 (2.0)	1.7 (1.7)
Modelling language	1.3 (1.5)	1.7 (1.6)	1.7 (1.7)	1.5 (1.6)
Encouraging use of new words	1.1 (1.3)	1.4 (1.7)	1.5 (1.4)	1.3 (1.5)
Using lexical or syntactic contrasts	1.1 (1.5)	1.0 (1.1)	1.7 (1.8)	1.2 (1.5)
Supporting listening skills	1.0 (1.5)	1.6 (1.9)	1.0 (1.0)	1.2 (1.6)
Encouraging turn taking	.8 (1.0)	1.0 (1.1)	.9 (1.3)	.9 (1.1)
Oral scripting of activities	.6 (.9)	.8 (1.1)	1.2 (1.5)	.8 (1.2)
Praising non-verbal communication	.8 (1.6)	1.0 (1.6)	.7 (1.2)	.8 (1.5)
Providing clear language choices	.7 (.9)	.6 (1.2)	.4 (.8)	.6 (1.0)

We considered whether we could capture the differences across *Language Learning Interactions* by reducing the data using an exploratory factor analysis. Using a principal components analysis with varimax rotation we identified 5 factors, with eigenvalues greater than one, accounting for 67 per cent of the variance. These are presented in Table 3.2 with accepted levels of item loading.

Table 3.2 Principal Component Analysis (Varimax Rotation) for Language Learning Interactions

Factor	Items	Loading	Variance accounted for
1	Using children's names to draw attention	.59	21.9
	Getting down to child's level	.79	
	Using natural gestures	.61	
	Using symbols to reinforce language	.59	
	Pacing of oral language	.60	
	Pausing	.63	
	Confirming contributions	.67	
	Imitating	.75	
2	Labelling	.63	13.5
	Encouraging use of new words	.84	
	Using open ended questions	.56	
	Modelling language	.69	
3	Encouraging listening skills	.85	13.2
	Praising non-verbal communication	.78	
4	Commenting	.71	9.9
	Using clear language choices	.69	
	Encouraging turn taking	.63	
5	Scripting	.73	8.5

The five factors suggest the following structure in terms of variance accounted for: Factor 1: acknowledging learner needs; Factor 2: developing language skills; Factor 3: supporting non-verbal communication; Factor 4: directing language learning, and Factor 5: language-modelling responses. These dimensions may provide a useful guide in interpreting the

profile of language learning interactions and by indicating broader areas to focus on in considering *language learning interactions* in the classroom.

3.3 Potential Uses of the CsC Observation Tool

The aim of the project was to design an evidence informed tool to be used in schools to support children's oral language development. Piloting, observation in 101 different classrooms and interviews and discussions with education and health professionals have allowed us to examine the data collected to consider the possible ways the CsC Observation Tool might be used. In the following section we provide examples of the ways the tool can be used.

The following section focuses on using the CsC Observation Tool:

- in schools
- to support training
- to Identify Local Authority INSET planning
- to monitor the impact of interventions

3.3.1 Using the CsC Observation Tool in Schools

The CsC Observation Tool can be used in schools by individual teachers or groups of teachers to monitor their practice and audit their classroom environments. One SENCO commented that it would be useful to video teachers and get them to use the scale to rate the videos as a measure of professional development. Another SENCO mentioned that it had potential use with Newly Qualified Teachers and was particularly useful since it was a profile not a score. Finally it was suggested that learning support assistants (LSAs) could be included to consider the ways in which language learning opportunities were provided to children with special educational needs. By producing specific, guided feedback on the language environment, learning opportunities and adult-child interactions, areas of strength and areas for development would both be identified. Follow-up observations can be used again to identify changes to practice.

3.3.2 Using the CsC Observation Tool to Support Training

3.3.2.1 Continuing Professional Development

There has been a move away from models of continuing professional development for teachers which rely on courses and workshop events, towards more individual-focused, school-led approaches (Knight, 2001; Harland & Kinder, 1997; Myers, Simonsen, & Sugai, 2011). The CsC Observation Tool can be used to facilitate this, by providing individually

tailored feedback on supporting communication. Effective use of specific feedback has been reported to result in changes to teaching practice (Rathel, Drawsgow, & Christle, 2008; Codding et al. 2005; Myers, Simonsen, & Sugai, 2011). As more professional development efforts are shifted from single training events to systematic, continued support for development, the CsC Observation Tool provides a framework to structure feedback and encourage discussion about both the items within the tool and classroom practice. The following case study provided by Sarah McMenamin, Principal SLT Lewisham details the use of the tool in large scale training,

3.3.2.2 Case Study – Lewisham Healthcare NHS Trust SLT Team

The following case study is provided by the SLT Team in Lewisham:

In 2011, as part of its local response to the National *Hello* campaign (http://www.hello.org.uk), the SLT team in Lewisham Local Authority promoted a whole school approach to communication and learning – with an emphasis on adaptations to learning environments that maximise communication opportunities for children, staff and parents/carers. This included a one day conference where information about the CsC Observation Tool was presented. Following this presentation the Local Authority speech and language therapists felt the tool could be used to support training. The view was that the CsC Observation Tool was a flexible, practical tool which could enhance therapists and schools working together.

Many schools in Lewisham commission additional SLT resources to complement the core provision offered by the Mainstream SLT service. Much of the work undertaken by the enhanced SLT service is aimed at the "universal" and "targeted" population of the Needs Assessment Tool. Inherent to the outcomes of the enhanced SLT service in schools is embedding practice and building sustainability over time – targeting resources where it will achieve maximum benefit.

CsC Framework and Training

The provision of training to schools in Lewisham is an important part of the SLT service and the team is committed to the development of quality training packages - seen as a platform for information sharing and joint working between therapists and school staff interested in extending their knowledge and understanding about speech, language and communication development and its impact on learning in the classroom setting. The SLT team training program complements the model of service delivery of working with and through others.

In September 2011, a collaborative group of 5 schools who had signed up for a 3-year enhanced SLT service requested a combined INSET for January 2012. The request was not without challenges for the SLT team. Each school was at a different stage in terms of the SLT training they had undertaken – thus all schools came to the table with different training needs and their own views on how the training should be delivered; there were also variations in access to the SLT service over time. In addition, the total number of staff from the five schools attending the INSET was estimated to be 220.

In order to accommodate participants and crystallise focus for the training the decision was made to split the training into a Foundation/KS1 INSET (120) and a KS2 INSET (100). The primary focus was to provide foundation training for the newly formed collaborative group that would be practical for school staff and enable us to begin to identify potential ways of working towards embedding practice over time.

It was evident to the SLT team that the CsC Framework provided a comprehensive review of the evidence base on which to understand interventions in language development for school age children within the classroom setting. The CsC research team was contacted to discuss the potential of using the CsC Framework in the upcoming INSET training. All five schools were engaged with the idea of using the CsC Observation Tool as a basis for the training. Thus the CsC Framework provided a common language and understanding for the conversations between SLTs and school staff in the planning and delivery of the training.

KS1 INSET training

The CsC Framework was used to underpin the Foundation/KS1 INSET with the aim of providing staff with a 'hands-on' experience. Prior to the in-service training the tool had been completed in a number of Lewisham classrooms, The CsC Observation Tool provided a structure for focus on different aspects of communication – the environment created and provided, the way we plan for communication and the way we actually make it happen.

In one practical activity staff took about 15 minutes to become familiar with the CsC Observation Tool and learn how to sort and separate the different items within the tool. The informal nature of the task and discussion points enabled staff to reflect upon and share practice.

As part of the INSET planning, the CsC research team offered to support school staff and SLTs to undertake pre and post measures using the CsC Observation Tool in selected KS1classrooms in each of the schools. The initial scores were collated by the CsC research

team and the data were used in the training as a focus point for discussion. This personalised the training, making it immediately relevant (and of interest) to all participants on the day. It also provided a clear profile of schools and immediately removed any sense about our local circumstances being different or the tool not being applicable to us.

KS2 INSET training

For the KS2 INSET the structure of the CsC Framework was used to reflect upon practice within the classroom and inform discussion points throughout the day. KS2 school staff were receptive to the underlying evidence of the CsC Framework and were able to make links to their own practice even though the framework does not formally extend to the KS2 cohort.

The INSET focused on the three dimensions included in the CsC Observation Tool (Environment, Opportunities and Interactions) and what these might look like in the KS2 classroom. A café model was used in which staff were organised to rotate across each of the three dimensions of the CsC Observation Tool (each area on a café-style table) and school staff were encouraged to read and respond to sets of tool-based items written on tablecloths. This informal style supported joint discussion of ideas and individual and school practice across the 5 schools in KS2. School staff were given additional time to record on each the table the challenges and opportunities that each statement afforded. The responses from each table were collected, collated and shared amongst the schools and this has become a resource for identifying areas of focus for schools and the collaborative as well as future training needs.

Outcomes and Reflections

The CsC Framework enabled the SLT team to add an all-important practical, classroom-focused element to the whole day INSET training and it proved flexible enough even within the context of training 220 participants from 5 different schools.

The CsC Framework provided the vehicle through which to start a discussion on quality of teaching and learning – for all children. For the SLT team it was important that the training was able to encompass a whole school, whole collaborative approach to support every child's communication development and learning. It provided a valuable opportunity for joint working across the 5 schools in the collaborative and identifying areas for further development within and across the schools in the future.

It also created an appetite for further peer review of classroom practice – school staff recognised that any one observation was just a snapshot and they identified the need to obtain better evidence about what was taking place in each classroom at different times of the day, for different curriculum areas and for different practitioners.

The framework within the context of the INSET has proved to be an effective resource for the identification of future training needs. SLTs have found it useful in guiding discussions around different ways of working in schools.

For SLTs and school staff, using the CsC Observation Tool as part of classroom based observations definitely became easier with practice. Initially there is a lot of information to look at and out for and it can be hard, unless you are very familiar with the framework, to find the right place to record what you are seeing. Staff reported that sometimes it was difficult to record five examples of each item on the CsC Observation Tool and it was helpful to consider in feedback that some items of the CsC Observation Tool are more relevant to certain activities/year groups. All involved needed to be aware of the 'snapshot' nature of the CsC Framework and that not all of the areas may be covered during one observation.

We would also strongly recommend introducing the CsC Framework to school staff in a meeting or information session prior to undertaking classroom observations. The majority of teaching staff who were observed mentioned that they appreciated being shown the CsC Observation Tool prior to their class being observed. On reflection, spending time with individual teaching staff and familiarizing them with the CsC Observation Tool supported the acceptance of the project and minimized any potential tensions of teaching practice being 'judged' or scrutinized.

The CsC Framework and INSET training has been referred to in follow-up training in the collaborative for Teaching Assistants (TAs) learning to run Speaking & Listening groups. The CsC Framework supports staff who are starting or may already be running groups in schools to understand why opportunities for group interaction are so important for children's communication and learning. Within the small group training, the SLT team is able to model to school staff some of the language learning interactions that support communication development (pacing; pausing; use of symbols, objects and props; encouraging turn-taking and praising children's listening skills). Even in a relatively short amount of time we have found that when used in this way the CsC Framework validates the skills that we are trying to embed in the school-based speaking & listening groups.

For the wider SLT team the CsC Framework has informed our clinical recommendations in terms of assessment of individual children - enabling us to link specific clinical needs and make them meaningful within an educational context.

All schools expressed interest in the development of a similar tool for use within KS2. Some of the feedback from the KS2 INSET expressed confusion about the CsC Framework as it was mentioned but not formally used in the training and thus staff were interested in seeing it.

Some head teachers stated that they would be interested in using the CsC Framework as a performance measure to evaluate and support quality first teaching practice.

Next steps

Follow-up observations using the CsC Observation Tool in those classrooms the data have been collected in.

All schools have expressed an interest in a roll-out of CsC observations in all KS1 classes across the collaborative.

3.3.3 Using the CsC Observation Tool as an Aid to Wider INSET Planning

More than 10 classes were observed across five local authorities and so we were able to examine whether the CsC Observation Tool could be used to identify INSET planning or need for speech and language therapy support. This is a limited sample but provides indicative evidence of mapping differences across authorities. Figure 3.4 presents data for the three dimensions of the CsC Observation Tool across the five local authorities. All local authorities follow the pattern identified for the dimensions for the sample as a whole (Environment > Interactions > Opportunities). There was a significant effect of local authority ($F(4, 84) = 20.53$, $p < .001$, $\eta p^2 = .51$). Local authority 1 achieved significantly higher scores than local authorities 3, 4, and 5 (all *ps* <.001). Local authority 2 achieved significantly higher scores than local authority 3 ($p = .01$) and local authority 5 ($p < .001$). There were no other significant differences. As the Figure 4.4 shows differences were most evident for the dimensions of *Language Learning Opportunities* and *Language Learning Interactions;* dimensions which are critical in developing pupils' oracy skills.

For example, a local authority could compare its data with the results presented here, consider why differences between dimensions exist and determine its INSET priorities.

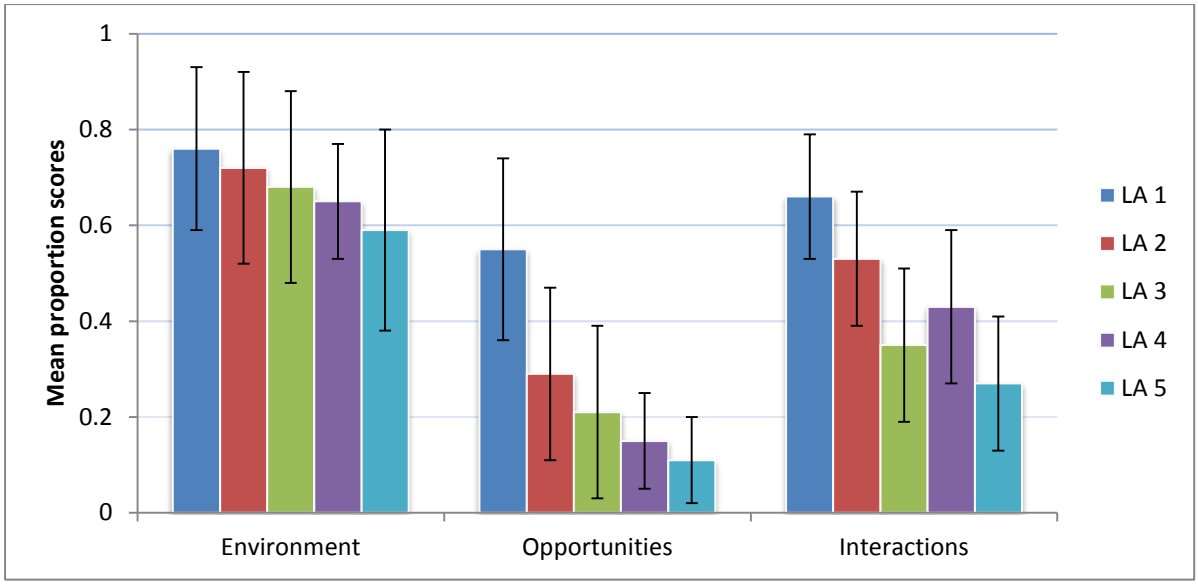

Figure 3.4: Mean (+/- SD) of Proportion Scores for Five Different Local Authorities for the Three Dimensions – *Environment, Opportunities and Interactions*

3.3.4 Using the CsC Observation Tool to Monitor the Impact of Interventions

Evaluating the impact of interventions is difficult but an important aspect of developing evidence informed practice. Collecting views of participants is subject to a number of biases so there is a need to provide objective evidence of change. The CsC Observation Tool could contribute to intervention evaluations as baseline and follow-up measures can be used to compare differences across time.

As part of the development of the tool, we were able to complete the CsC Observation Tool before and after a communication intervention in a small number of intervention and comparison classrooms. In this section, we report the differences between these two time points as a feasibility study. These results are not to be considered as an evaluation of the intervention because the time between observations was short (2-3 months between observations), there were difficulties in implementing the training package in a timely manner in some settings and power is reduced because of the sample size (Intervention schools *n* = 28; Comparison classrooms *n* = 15). However, these data point to the ways in which the CsC Observation Tool could be used across settings to examine changes in the ways in which oral language is supported in classrooms. Pre and post measures are presented for intervention and comparison settings in Figure 3.5.

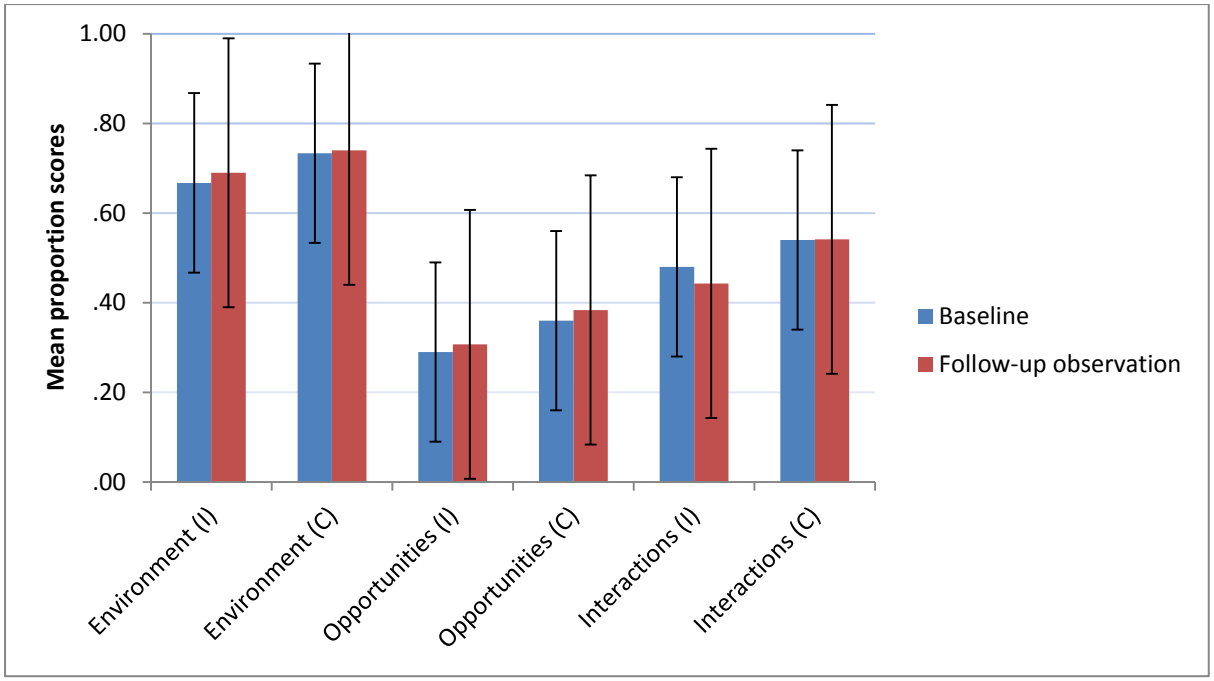

Figure 3.5: Mean (+/- SD) of proportion scores for intervention (I) classes and comparison (C) classrooms

There was no statistically significant effect of the intervention ($F(1, 41) = 0.16$, *ns*) and no significant differences across time in the 43 classrooms ($F(1, 41) = 0.10$, *ns*) but the effect of dimension remains significant ($F(2, 82) = 83.66$, $p < .001$, $\eta p^2 = .67$). Both intervention and comparison classrooms showed stability in their profiles over a period of 2-3 months between observations.

4. IMPLICATIONS FOR POLICY AND PRACTICE

We designed a tool that could be used in classrooms and we carried out a feasibility study in 101 classroom settings. In the development of the tool, the feasibility trial and the analysis of the data collected, a number of issues were raised which are relevant to professional practice and policy.

Firstly, our results have shown that, overall, a large proportion of the classrooms observed provided strong language learning environments. These were environments which captured elements of best practice and were appropriately modified to take into account children's needs. There was, however, less evidence of children being exposed to high quality, sensitive and consistently responsive language learning interactions. An item analysis of the CsC Observation Tool revealed that, while there were strengths in terms of acknowledging learner needs, there was less evidence of interactions to specifically develop the children's language learning. Language learning opportunities were also less evident in our observations. This finding highlights the need for considering not only how to organise the classroom space to maximise language enhancement but the importance of adults' role in fine tuning their oral language and considering the activities they use with children to scaffold their development in a regular and deliberate manner.

There was also some indication from our data of differences between urban and suburban settings observed in relation to the *Language Learning Opportunities* provided to children, in that fewer opportunities were evident in urban settings than in suburban settings. Why this difference occurred is not clear as there were no structural differences between the classes - such as differences in the numbers of children or numbers of children with English as an additional language. While this difference may reflect a sampling bias in the classes observed, it is also worth considering what other factors might influence this result. It may, for example, be more challenging for school staff to provide language learning opportunities in areas of social disadvantage.

A further important implication from our study is related to the different types of *Language Learning Opportunities* evident in the classrooms observed. In the majority of classrooms, strengths were evident in both small group work facilitated by adults as well as the active involvement of all children in group work. In contrast, there were very few occurrences of interactive book reading observed, despite a significant proportion of observations taking place during the literacy lesson. Interactive book reading occurs when children have opportunities to engage in reading facilitated by an adult who encourages oral discussion

about the book, the vocabulary contained in the book and the different aspects of the narrative (for example: asking predictive questions, joining in with repetitions, story packs etc).

These observations have implications for wider planning during the day related to language learning. Children need opportunities to practise language skills. In communication supporting environments, the focus is on children receiving multiple but also regular opportunities to experience specific linguistic concepts in diverse contexts (with adults and their peers), and classroom experiences should be organised to foster repetition and high quality language stimulation. Importantly these experiences need to include more advanced language learning interactions that have been shown to develop oral language, including grammatical skills, vocabulary and narrative. Together, these techniques constitute high-quality verbal input by adults.

An important implication of the present study is the need for all school staff to fully understand, appreciate and achieve quality use of these language learning interaction techniques. Conversations between adults and children that are characterised by high quality language learning interactions are the core of the communication supporting classroom. A classroom may have an exemplary physical environment and a deliberate provision of daily language activities; however, without adult-child interactions of sufficiently high quality and sensitivity, these efforts are not likely to result in the desired child outcomes. Data from our study and other studies in the same field (Girolametto, Hoaken, Weitzman, & van Leishout, 2000) suggest that these language learning interactions occur less frequently than is desirable.

Observational learning (and discussion around these observations) can support practitioners in developing ways of talking with children to enhance the children's oral language. This can be achieved by using videotapes to observe other adults modelling particular strategies while interacting with children and then rating the models' conversational responsiveness (Ezell & Justice, 2000; Girolametto et al., 2003) or by practitioners watching videos of themselves interacting with children in their own classrooms. This allows staff the opportunity to evaluate their own strengths and needs in using specific language learning interaction techniques. The CsC Observation Tool provides professionals with a framework for evaluating the observations.

The present study also indicates a number of different ways the CsC Observation Tool could be used, with important implications for professional practice and language related policy. The example of Lewisham Local Authority highlights how the CsC Observation Tool

could be used as a part of continuing professional development and training for teaching staff. As such the tool could support peer review of classroom practice with regular feedback about classroom practices with teachers and other adults working in schools (such as Teaching Assistants and classroom support staff). Although there is a general concern expressed by teachers about the number of classroom observations (National Union of Teachers, 2011), the CsC Observation Tool is designed to be used as a supportive, developmental tool rather than a school/staff performance indicator. As such, if used in accordance with each school's policy on classroom observations, the CsC Observation Tool has the potential to provide individually tailored feedback to increase effective teaching practice.

In addition the Lewisham SLT team also found the CsC Framework useful in that it was the research based and offered conceptual framework to considering the classroom environment. This comment has been repeated in a number of settings during the feasibility study. The ways in which the dimensions are constructed allows professionals to profile the classroom environment across dimensions and consider areas of development.

The CsC Observation Tool could further be used as a whole-school resource by speech and language therapy services and school senior management teams to evaluate and support *effective* teaching practice for all children. Ensuring high quality language teaching and learning should reduce the numbers of children who require specialist language support. Where individual children fail to respond to systematic and regular exposure to evidence based oral language interactions additional assessments of individual children may be needed. Interventions, if appropriate, could be embedded within the educational context to meet the child's needs.

Finally, the present study highlighted how the CsC Observation Tool could potentially be used to contribute to intervention evaluations. For interventions aiming to improve language teaching, baseline and follow up measures could be used to compare differences across time and examine changes in the ways in which communication is supported before and after the implementation of the intervention. As such, the CsC Observation Tool is a quick, flexible tool which could be used in conjunction with other measures of evaluation such as collecting views of participants to provide objective evidence of change.

5. FUTURE DEVELOPMENTS

The CsC Observation Tool provides a basis for profiling opportunities in classrooms for children's oracy skills to be developed. One of the strengths of the tool is the flexibility in its use. Teachers, schools and professionals will wish to use it in different ways to support the development of practice. This flexibility of use was highlighted by the Lewisham case study.

It is, however, only a starting point for developing oracy skills and professionals may decide to fine tune the observations that are made: for example, professionals could focus on group activities and the ways in which language learning interaction behaviours are used in those contexts or whether there is consistency in their use by all staff. There will also be a need to consider specific additions for different areas of the curriculum. For example, when lessons in mathematics are taking place, are the questions used by teachers stretching the children's oral skills in the vocabulary and concepts which are specific to mathematics.

The tool was developed to be applicable in Reception and Key Stage 1. The language demands and cognitive demands as well as the approaches to teaching which occur at different Key Stages will require different features to be sampled and, potentially, different features to be addressed.

Finally, the study was about the development and feasibility of use of the CsC Observation Tool. Further work is required to establish whether and in what ways it can be used to change practice and reduce the numbers of children who experience challenges with oral language.

6. CONCLUSIONS

An evidence based tool has been developed to capture aspects of the ways in which classrooms can support oral language. Of particular importance is that children have the opportunity to engage in communicative exchanges where their language is supported in a regular, sensitive and consistent manner.

In many cases, we have seen excellent teaching and learning sessions by highly skilled professionals who are committed to developing good practice. Our data indicated that in many cases the structural aspects which are important for good oral language are in place. These aspects will inevitably remain in place throughout the school day. There was less evidence from our study of children having specific opportunities to develop these skills during our observation periods or of school staff regularly fine tuning their oral language to scaffold the children's development.

The different ways the tool could be used, from supporting professional development and practice to informing training and evaluating interventions, suggest an exciting future development in the way we cater for children's educational needs and a unique approach in ensuring an effective language learning environment for all children. Our study has demonstrated that creating communication supporting classroom environments is a complex and multidimensional process. Although many educators, therapists and policymakers are aware of specific qualities of language-rich environments, putting this knowledge to work takes considerable effort. By following an evidence based approach, the present study described a process for thinking about *effective* language teaching and different ways of implementing communication supporting classrooms. This process-oriented approach provides a framework for ensuring children have the language-rich classroom environments that are most beneficial to their development.

REFERENCES

Baumwell, L., Tamis-LeMonda, C. S., & Bornstein, M. H. (1997). Maternal verbal sensitivity and child language comprehension. *Infant Behavior and Development, 20,* 247-258.

Bercow, J. (2008). *The Bercow Report: A review of services for children and young people (0-19) with speech, language and communication needs.* Nottingham: DCSF.

Boyle, J., McCartney, E., Forbes, J., & O'Hare, A. (2007). A randomised control trial and economic evaluation of direct versus indirect versus group modes of speech and language therapy for children with primary language impairment, *Health Technology Assessment, 11*(25), 1-139.

Chapman, R. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry, 41*, 33-54.

Codding, R.S., Feinberg, A.B., Dunn, E.K., & Pace, G.M. (2005). The effects of immediate performance feedback on implementation of behaviour support plans. *Journal of Applied Behaviour Analysis*, 38, 205-219.

Coffield, M. & O'Neill, J. (2004). The Durham experience: promoting dyslexia and dyspraxia friendly schools. *Dyslexia, 10*, 253-264.

Crosskey, L. & Vance, M. (2011). Training teachers to support pupils' listening in class: An evaluation using pupil questionnaires. *Child Language Teaching and Therapy, 27*(2), 165-182.

Ezell, H. K., & Justice, L. M. (2005). *Shared storybook reading: Building young children's language and emergent literacy skills*. Baltimore, MD: Paul H. Brookes.

Girolametto, L., & Weitzman, E. (2002). Responsiveness of child care providers in interactions with toddlers and pre-schoolers. *Language, Speech and Hearing Services in Schools, 33,* 268-281.

Girolametto, L., Weitzman, E., & Greenberg, J. (2003). Training day care staff to facilitate children's language. *American Journal of Speech-Language Pathology, 12*, 299-311.

Harland, J., & Kinder, K. (1997). Teachers' continuing professional development: framing a model of outcomes. *Journal of In-Service Education, 23*(1), 71-84.

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development, 74,* 1368-1378.

Howe, C. & Mercer, N. (2007). *The Primary Review: Research Survey 2/1b, Children's Social Development, Peer Interaction and Classroom Learning*. Cambridge: University of Cambridge.

Justice, L. M., & Ezell, H. K. (1999). Vygotskian theory and its application to language assessment: An overview for speech-pathologists. *Contemporary Issues in Communication Science and Disorders, 26,* 111-118.

Justice, L. M., & Kaderavek, L. M. (2002). Using shared book reading to promote emergent literacy. *Teaching Exceptional Children, 34,* 8-13.

Knight, P. (2002). A systemic approach to professional development: learning as practice. *Teaching and Teacher Education, 18(3)*, 229-241.

Lindsay, G., Dockrell, J.E., Desforges, M., Law, J., & Peacey, N. (2010) Meeting the needs of children with speech, language and communication difficulties. *International Journal of Language and Communication Disorders. 45*, 448-460.

Lindsay, G., Desforges, M., Dockrell, J., Law, J., Peacey, N., & Beecham, J. (2008). *Effective and efficient use of resources in services for children and young people with speech, language and communication needs.* (DCSF-RW053). Nottingham: Department for Education. Retrieved from https://www.education.gov.uk/publications/eOrderingDownload/DCSF-RW053.pdf

Martin, D. & Miller, C. (1999). *Speech and language difficulties in the classroom.* London: Fulton Publishers.

Myers, D.M., Simonsen, B., & Sugai, G. (2011). Increasing teachers' use of praise with a response-to-intervention approach. *Education and treatment of children, 34(1),* 35-69.

National Reading Panel Report (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. Bethesda, MD: National Institute of Child Health and Human Development.

National Union of Teachers (2011*). Classroom observation guidance*. http://www.teachers.org.uk/observation.

Rathel, J.M., Drasgow, R., & Christle, C.C. (2008). Effects of supervisor performance feedback on increasing preservice teachers' positive communication behaviours with students with emotional and behavioural disorders. *Journal of Emotional and Behavioural Disorders*, *16(2)*, 67-77.

Resnick, L. B., Michaels, S., & O'Connor, C. (2010). How (well structured) talk builds the mind. In R. Sternberg & D. Preiss (Eds.), *From genes to context: New discoveries about learning from educational research and their applications.* New York: Springer.

Roskos, K., & Neuman, S. B. (2002). Environment and its influences for early literacy teaching and learning. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 281-294). New York: The Guildford Press.

Roulstone, S., Wren, Y., Bakopoulou, I., & Lindsay, G. (in press). Exploring educational and speech and language therapy interventions for children with speech, language and communication needs. *Child Language Teaching and Therapy.*

Roulstone, S., Wren, Y., Bakopoulou, I., Goodlad, S., & Lindsay, G. (2012). *Exploring interventions for children and young people with speech, language and communication needs: A study of practice.* London: DfE.

Shanahan, T. (2006). Relations among oral language, reading and writing development. . In C. MacArthur, S. Graham, & J. Fitzgerald (Eds. pp171- 183), *Handbook of writing research*. New York: Guilford Press.

Snowling, M. & Hulme, C. (2011). Evidence based interventions for reading and language difficulties: creating a virtuous circle. *British Journal of Educational Psychology, 81,* 1-23.

APPENDIX 1 – BCRP REPORTS

All the BCRP reports are available from the BCRP page on the Department for Education's website: http://www.education.gov.uk/researchandstatistics/research and also from the BCRP page in the CEDAR, University of Warwick website: http://www.warwick.ac.uk/go/bettercommunication

Main report

1. Lindsay, G., Dockrell, J., Law, J., & Roulstone, S. (2012). *Better communication research programme: Improving provision for children and young people with speech, language and communication needs.* London: DfE.

This report presents the main recommendations of the whole Better Communication Research Programme (BCRP). It draws on evidence provided in the thematic and technical reports. This report also considers the overall implications for policy, practice and research, and indeed seeks to bridge the gap between this substantial research programme and the policy and practice agenda.

Interim reports

2. Lindsay, G., Dockrell, J.E., Law, J., Roulstone, S., & Vignoles, A. (2010) *Better communication research programme 1st interim report DfE-RR070. London: DfE*. (70pp). http://publications.education.gov.uk/eOrderingDownload/DFE-RR070.pdf

This report presents interim findings from the project that had been underway between January and July 2010; best evidence on interventions; the academic progress of pupils with SLCN; economic effectiveness; the initial phase of the prospective longitudinal study of children and young people with language impairment (LI) and autism spectrum disorder (ASD); and the preferred outcomes of children and young people with SLCN, and of their parents.

3. Lindsay, G., Dockrell, J.E., Law, J., & Roulstone, S. (2011) *Better communication research programme 2nd interim report. DFE-RR 172*. London: DfE. (131pp). https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR172.pdf

This report presents interim findings of the project that had been underway between July 2010 – January 2011. Further work is reported from analyses of the national pupil data sets examining development and transitions of pupils with SLCN or ASD between categories of special educational needs, the prospective study, and parents' preferred outcomes (an online survey). In addition, interim reports from new projects include: the initial phase of development of a Communication Supporting Classrooms Tool; a survey of speech and language therapists' practice regarding interventions; a study of language and literacy attainment during the early years through Key Stage 2, examining whether teacher assessment provides a valid measure of children's current and future educational attainment (led by Margaret Snowling and Charles Hulme); two studies of the relationship between SLCN and behaviour, with Victoria Joffe and Gillian Baird respectively; cost effectiveness of interventions; and the setting up of a prospective cohort study of speech and language therapy services for young children who stammer.

Thematic reports

4. Dockrell, J., Ricketts, J. & Lindsay, G. (2012). *Understanding speech, language and communication needs: Profiles of need and provision.* London: DfE.

This thematic report examines the nature of speech language and communication needs and the evidence from BCRP studies that have explained both the nature and needs encompassed by the category and the provision made to meet those needs. This report draws upon six projects (8, 9, 10, 11, 14 and 15).

5. Law, J., Beecham, J. & Lindsay, G. (2012). *Effectiveness, costing and cost effectiveness of interventions for children and young people with speech, language and communication needs.* London: DfE.

This thematic report first considers the nature of evidence based practice in health and education before reviewing the evidence for the effectiveness of interventions for children and young people with SLCN. The report also considers cost effectiveness and how it might be measured before examining the evidence of the cost effectiveness of SLCN interventions. The report draws on projects, 8, 10, 11 and 12.

6. Lindsay, G. & Dockrell, J. (2012). *The relationship between speech, language and communication needs (SLCN) and behavioural, emotional and social difficulties (BESD).* London: DfE.

This thematic report explores the relationship between SLCN and behavioural, emotional and social difficulties. . We argue that there are different patterns of relationship between SLCN and ASD, and different types of behavioural, emotional and social difficulties. The report draws on the 2nd interim report (report 3) and project reports 9, 11 and 15.

7. Roulstone, S. & Lindsay, G. (2012). *The perspectives of children and young people who have speech, language and communication needs, and their parents.* London: DfE.

The BCRP ensured that the perspectives of parents and children were explored through a number of different projects. This project explores the evidence primarily from projects 9 and 12, drawing on evidence from a series of specific studies of parents' and children's perspectives and also those of the parents in our prospective study.

Technical reports

8. Dockrell, J. E., Bakopoulou, I., Law, J., Spencer, S., & Lindsay, G. (2012). *Developing a communication supporting classroom observation tool.* London: DfE.

This study reports the development of an observational tool to support teachers, SENCOs, speech and language therapists and others to examine the degree to which classrooms support effective communication. The report comprises a review of the evidence base for developing effective communication and an account of the empirical study to develop and determine the technical qualities of the tool.

9. Dockrell, J., Ricketts, J., Palikara, O., Charman, T., & Lindsay, G. (2012). *Profiles of need and provision for children with language impairment and autism spectrum disorders in mainstream schools: A prospective study.* London: DfE.

The prospective study was the most substantial project in the BCRP running throughout the whole period of the research. Focusing on children and young people initially 6-12 years old, we report on the nature of their abilities in language, literacy, behavioural, emotional and social development; the perspectives of the parents; the support provided as examined by classroom observations and specially created questionnaires completed by their teachers and SENCOs.

10. Law, J., Lee, W., Roulstone, S., Wren, Y., Zeng, B., & Lindsay, G. (2012). *"What works": Interventions for children and young people with speech, language and communication needs.* London: DfE.

This report provides a review of 60 interventions for children and young people with SLCN, all evaluated against 10 criteria. The report will form the basis of a web-based resource to be developed by the Communication Trust for easy access by practitioners and parents.

11. Meschi, E., Mickelwright, J., Vignoles, A., & Lindsay, G. (2012). *The transition between categories of special educational needs of pupils with speech, language and communication needs (SLCN) and autism spectrum disorder (ASD) as they progress through the education system.* London: DfE.

Analyses of the School Census and National Pupil Database are used to examine the transition made by pupils with SLCN or ASD over time and by age. We examine factors that are associated with transition between levels of special educational need (School Action, School Action Plus and Statement) and having no special educational need (non-SEN), including having English as an Additional Language and attainment. We also explore school characteristics associated with different transitions to other categories of SEN.

12. Roulstone, S., Coad, J., Ayre, A., Hambley, H., & Lindsay, G. (2012). *The preferred outcomes of children with speech, language and communication needs and their parents.* London: DfE.

This report provides findings from four different studies addressing the perspectives of children and young people with SLCN, and those of their parents. Data are reported from arts-based participating workshops for children, focus groups and a survey for parents; and a systematic review of quality of life measures for children.

13. Roulstone, S., Wren, Y., Bakopoulou, I., Goodlad, S., & Lindsay, G. (2012). *Exploring interventions for children and young people with speech, language and communication needs: A study of practice.* London: DfE.

As a complementary study to our analysis of the evidence for interventions, we also carried out an interview study of speech and language therapy managers and educational psychology service managers, on the basis of which we conducted a national survey of speech and language therapists to examine prevalence of use of the different approaches.

14. Snowling, M. J., Hulme, C., Bailey, A. M., Stothard, S. E., & Lindsay (2011). *Better communication research project: Language and literacy attainment of pupils during early years and through KS2: Does teacher assessment at five provide a valid measure of children's current and future educational attainments? DFE-RR172a.*

London: DfE. https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR172a.pdf

We report a study led by Margaret Snowling and Charles Hulme which explored whether teacher assessment and monitoring could be used to identify children with language difficulties in need of early interventions. This study was conducted to inform the Tickell Review of the Early Years Foundation Stage, in particular the proposals for a simplified framework and assessment process.

15. Strand, S., & Lindsay, G. (2012). *Ethnic disproportionality in the identification of speech, language and communication needs (SLCN) and autism spectrum disorders (ASD).* London: DfE.

This report complements that of Meschi et al (number 11). Using School Census data from four years (2005, 2007, 2009 and 2011) the report examines the issue of ethnic disproportionality (i.e. over- and underrepresentation of pupils from different ethnic groups) with respect to SLCN and ASD.

16. Roulstone, S., Hayhow, R., White, P. & Lindsay, G. (2012). *Prospective cohort study of speech and language therapy services for young children who stammer.*

This prospective cohort study follows children referred to speech and language therapy services because of stammering. The study tracks the children's process through the system and their outcomes.

17. Meschi, E., Vignoles, A., & Lindsay, G. (2010). *An investigation of the attainment and achievement of speech, language and communication needs (SLCN).* http://www.warwick.ac.uk/go/bettercommunication

This technical report presents early analyses upon which the study reported in report number 11 is based.

APPENDIX 2

2012 Better Communication Research Programme

Dockrell, J. E., Bakopoulou, I., Law, J., Spencer, S., & Lindsay G.

RATING THE EVIDENCE

COMMUNICATION SUPPORTING CLASSROOMS PROJECT

RATING CRITERIA

STRONG: Randomised intervention studies, Quasi-experimental intervention studies measuring targeted and non-targeted variables, Population studies monitoring progress and identifying factors which predict progress.

MODERATE: Quasi-experimental intervention studies where only targeted language variables have been measured, Reviews of empirical studies (more than 10 studies).

INDICATIVE: Single poorly controlled studies without matched comparisons or non-targeted measures.

OTHER: Government documentation or policies, SLCN frameworks, SLCN documentation, Elements/Items contained in a standardised rating scale.

STUDY **(Numbers against each paper below are used to indicate evidence for each item of the CsC Observation Tool)**	KEY FEATURES	RATING
1. Justice, L.M. (2004). Creating Language-Rich Preschool Classroom Environments. *Teaching Exceptional Children,* 36-44.	• Review of the literature on elements of language-rich classroom environments. • Proposed framework on how to create a CsC.	MODERATE
2. Justice, L. M., MCGinty, A., Guo, Y., & Moore, D. (2009). Implementation of responsiveness to intervention in early education settings. *Seminars in Speech and Language, 30,* 59-74.	• Review of the literature on Response to Intervention. • How to design and implement a high quality Tier 1 learning environment that systematically improves language and literacy outcomes and how to design a cohesive assessment system that appropriately identifies children who show inadequate response to the Tier 1 and Tier 2 learning opportunities. • A model is proposed.	MODERATE
3. Bond, M. A., & Wasik, B. A. (2009). Conversation Stations: Promoting Language Development in Young Children. *Early Childhood Educational Journal, 36,* 467-473.	• Review of the literature on creating opportunities for structured conversations with adults. • A framework of how to use it in classrooms and a case study are described.	INDICATIVE
4. Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the early years. London: DFES.	• EPEE Project.	STRONG
5. Harms, T., Clifford, R. M., & Cryer, D. (1996). Early Childhood Environment Rating Scale – Revised (ECERS-R). London: Teachers College Press.	• Items from a standardised assessment.	OTHER
6. Sylva, K, Siraj-Blatchford, I., Taggart, B. (2006). Assessing Quality in the Early Years: Early Childhood Environmental Rating Scale – Extension (ECERS-E). Stoke-on Trent, UK and Sterling, USA: Trentham Books.	• Items from a standardised assessment.	OTHER
7. I CAN (2008). I Can Early Talk: A Supportive Service for Children's Communication. Accreditation Standards.	• SLCN Documentation.	OTHER
8. Communication Trust (2008). The Speech, Language and Communication Framework. http://www.communicationhelppoint.org.uk	• SLCN Documentation.	OTHER

9. Dockrell, J. E., & Shield, B. M. (2004). Children's perception of their acoustic environment at home and at school. *Journal of the Acoustical Society of America, 115,* 2964-2973.	• Large scale questionnaire survey that ascertained children's perceptions of their noise environment and the relationships of the children's perceptions to objective measures of noise. • 2036 children completed a questionnaire designed to tap a) their ability to discriminate different classroom listening conditions; b) the noise sources heard at home and at school c) their annoyance by these noise sources. • Teachers completed a questionnaire about the classroom noise sources. • Children were able to discriminate between situations with varying amounts and types of noise.	STRONG
10. Shields, B.M., & Dockrell, J.E. (2008). The effects of environmental and classroom noise on the academic attainments of primary school children. *Journal of the Acoustical Society of America, 123,* 133-144.	• Examined the impact, if any, of chronic exposure to external and internal noise on the test results of children aged 7 and 11 in London primary schools. • External noise was found to have a significant negative impact upon performance, the effect being greater for the older children. • Children are particularly affected by the noise of individual external events. • Test scores were also affected by internal classroom noise, background levels being significantly related to test results.	MODERATE
11. Dockrell, J. E., & Shield, B. M. (2006). Acoustical barriers in classrooms: the impact of noise on performance in the classroom. *British Educational Research Journal, 32*, 509-525.	• Exploration of the effects of typical classroom noise on the performance of primary school children on a series of literacy and speed tasks. • 158 children in six Year 3 classes participated. • Classes were randomly assigned to one of three noise conditions: Two noise conditions reflected levels of exposure experienced in urban classrooms; noise by children alone, that is classroom babble, babble plus environmental noise, babble and environmental. • Performance compared with performance under typical quiet classroom conditions or base. • Analyses controlled for ability • Children in the babble and environmental noise conditions performed significantly worse than those in the base and babble conditions on speed of processing tasks. • Performance on the verbal tasks was significantly worse only the babble condition.	STRONG
12. Building Bulletin 87, BB 87, Guidelines for Environmental Design in Schools (DCSF) http://teachernet.gov.uk/energy	• Government Documentation.	OTHER

13. Dowhower, S. L., & Beagle, K. G. (1998). The print environment in kindergartens: A study of conventional and holistic teachers and their classrooms in three settings. *Reading Research and Instruction, 37,* 161-190.	• Assessment of the physical print environment of 18 kindergarten classrooms analysing books, writing supplies, literacy centres, and incidents of print. These were subcategorised as student, teacher and commercially produced. • Suburban and holistic classrooms had significantly more writing tools and student/teacher generated print than rural, urban and conventional settings. • Urban and conventionally taught children saw more commercial print and had fewer literacy centres.	INDICATIVE
14. Justice, L.M., Kaderavek, J.N., Fan, X., Sofka, A., & Hunt, A. (2009). Accelerating Preschoolers' Early Literacy Development Through Classroom Based Teacher-Child Storybook Reading and Explicit Print Referencing. *Language Speech and Hearing Services in Schools, 40,* 67-85.	• Examination of the impact of teacher use of a print referencing style during classroom-based storybook reading sessions conducted over an academic year on preschoolers' early literacy development. • Randomised, controlled trial examined effects of a print referencing style on 106 preschool children in 23 classrooms for disadvantaged pre-schoolers. • Following random assignment, teachers in 14 classrooms used a print referencing style during 120 large-group storybook reading sessions during a 30-week period. • Teachers in 9 comparison classrooms read at the same frequency and with the same storybooks but used their normal style of reading. • Children whose teachers used a print referencing style showed larger gains on 3 standardised measures of print knowledge (alphabet knowledge, name writing, print concept knowledge) with medium effect sizes.	STRONG
15. Mol, S., Bus, A., & de Jong, M. (2009). Interactive book reading in early education: A tool to stimulate print knowledge as well as oral language. *Review of Educational Research, 79,* 979–1007.	• Meta-analysis examining to what extent interactive storybook reading stimulates vocabulary and print knowledge. • Quantitative review of 31 (quasi) experiments (2049 children) in which educators were trained to encourage children to be actively involved before, during and after joint book reading. • A moderate effect size was found for oral language skills, implying that both quality of book reading and frequency are important.	STRONG

16. Wasik, B. A. (2008). When fewer is more: Small groups in early childhood classrooms. *Early Childhood Education Journal, 35,* 515-521.	• Guidelines are presented on how to use small groups in early settings based on research-based best practices. • The benefits of small group instruction for both children and teachers are described. • Suggestions for managing small groups in classrooms are presented.	MODERATE
17. Morrow, L. M., & Smith, J. K. (1990). The effects of group size on interactive storybook reading. *Reading Research Quarterly, 25,* 213-231.	• Investigation of children's comprehension of stories and their verbal interactions during storybook readings in groups of varying sizes. • Adults read storybooks to 27 kindergarten and first-grade children from 5 school districts. • Each child heard three stories read in each of three settings: one-to-one, small group (3 per group) and whole-class (15 or more). • Measures were taken on only the third reading in each setting. • On probed and free recall comprehension tests, children who heard stories in the small-group setting performed significantly better than children who heard stories read one-to-one, who in turn performed significantly better than children who heard stories read to the whole class. • Children who heard stories read in a small group or one-to-one generated significantly more comments and questions than children in the whole-class setting.	MODERATE

18. Turnbull, K. P., Anthony, A. B., Justice, L., & Bowles, R. (2009). Preschoolers' exposure to language stimulation in classrooms serving at-risk children: The contribution of group size and activity context. *Early Education and Development, 20,* 53-79.	• Examination of preschoolers' exposure to 6 types of language stimulation techniques (LSTs) in classrooms serving at-risk children and consideration as to whether specific activity contexts were associated with educators' rate of use of different LSTs. • Several teacher-directed and child-directed activity contexts were videotaped in 14 classrooms. • Adult utterances were coded for group size, activity context, use of LSTs. • 5017 utterances were analysed (using descriptive analyses and logistic regressions). • One third of adult utterances were classified as LSTs and there was significant variation in educators' rate of use of LSTs. • LSTs were more likely in small group child-directed contexts than other contexts. • Educators' use of child-dependent LSTs was relatively less frequent in relation to child-independent LSTs in teacher-directed contexts than in child-directed contexts.	MODERATE
19. Dockrell, J. E., Stuart, M., & King, D. (2010). Supporting early oral language skills for English language learners in inner city preschool provision. *British Journal of Educational Psychology, 80,* 497-515.	• Development of an oral language intervention, Talking Time, designed to meet the needs of preschool children with poor language skills in typical preschool provision. • 142 4-year-old children attending three inner city preschools. • Quasi-experimental intervention study comparing children exposed to TT with children exposed to a contrast intervention and children receiving the statutory early years curriculum. Measures of targeted and non-targeted language and cognitive skills were taken. • TT had a significant effect on vocabulary, oral comprehension and sentence repetition but not narrative skills. No effects on the non-targeted skills.	STRONG
20. Saunders, W. M., & Goldenberg, C. (1999). Effects of instructional conversations and literature logs on limited- and fluent-English-proficient students' story comprehension and thematic understanding. *Elementary School Journal, 99,* 277–301.	• Investigation of the complexity of teacher questions in 14 preschool classrooms serving 4 year olds from low SES in order to explore the frequency and complexity of teacher questions and to determine the extent to which question types varied for different classroom contexts. • 5 teachers and 116 fourth and fifth graders participated. • Students randomly assigned to 1 of 4 treatment conditions. • Post-tests showed significant differences among treatment groups.	STRONG

21. Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classrooms. *Reading Research Quarterly, 39*, 188–215.	• Intervention to develop academic vocabulary of 5th Graders. • Greater growth of vocabulary knowledge in the intervention group than the experimental group.	MODERATE
22. Bickford-Smith, A., Wijayatilake, L., & Woods, G. (2005). Evaluating the Effectiveness of an Early Years Language Intervention. *Educational Psychology in Practice, 21,* 161-173.	• Evaluation of small-group and whole class approaches to language delay in one nursery setting. • 10 week (20min a day) intervention programme based on Living Language (Locke, 1985) – vocabulary focus. • 33 children in intervention (morning attenders) compared to afternoon attenders who received 20min numeracy intervention. • Pre- and post-testing using 100 words checklist and CELF-P. • Intervention group had greater progress in CELF-P subtests but not the 100 words list. • Structured observations found that staff did use targeted words during nursery but frequency varied with task. Little evidence of staff using other strategies to promote language. Did use open questions but did not use commentary or non-directive play. However, majority of interactions in both morning and afternoon sessions were instructions, reinforcing rules, and closed questions.	MODERATE
23. Best, W., Melvin, D., & Williams, S. (1993). The effectiveness of communication groups in day nurseries. *European Journal of Disordered Communication, 28,* 187–212.	• 3 inner city day nurseries. • Children whose communication was a concern were assessed on both formal (verbal and non-verbal) and informal (observational) measures. • At each nursery there was a control and experimental group. • Communication groups run with nursery staff (a SALT and a clinical psychologist) focusing on promoting communication skills through play. • Greater gains on reassessment for the experimental group.	MODERATE
24. NICHD Early Child Care Research Network (2000). The relation of child care to cognitive and language development. *Child Development, 71,* 960–980.	• Children from 10 sites in US were followed from birth to 3 (N's 595-856). • Multiple assessments of family and child are environments and of language and cognitive development were used.	STRONG

25. Collins, M. (2010). ELL preschoolers' English vocabulary acquisition from story book reading. *Early Childhood Research Quarterly, 25*, 84–97.	• Investigation of the effects of rich explanation, baseline vocabulary, home reading practices on ELL preschoolers' sophisticated vocabulary learning from storybook reading. • 80 typically developing pre-schoolers were tested in L1 (Portuguese) and L2 (English) receptive vocabulary and were assigned to experimental and control groups. • 8 books were selected and paired. • Experimental participants heard books read 3 times over a 3-week period with rich explanations of target vocabulary. • Controls heard stories read without explanations. • Parents completed questionnaires about the frequency, content, and language of home reading practices. • Rich explanation, initial L2 vocabulary, and frequency of home reading make significant contributions to sophisticated word learning from story reading.	STRONG
26. Hargrave, A. C., & Sénéchal, M. (2000). A book reading intervention with preschool children who have limited vocabularies: The benefits of regular reading and dialogic reading. *Early Childhood Research Quarterly, 15*, 75–90.	• Examination of the effects of storybook reading on the acquisition of vocabulary of 36 preschool children who had poor expressive vocabulary averaging 13 months behind chronological age. • Hypothesis: when children are active participants in story book reading the beneficial effects will be greater. • Groups of 8 children, all children exposed to the same books, read twice. • Greater gains for children in the dialogic-reading condition in vocabulary knowledge and a standardised expressive vocabulary test.	STRONG
27. Koshinen, P. S., Blum, I. H., Bisson, S. A., Phillips, S. M., Creamer, T. S., & Baker, T. K. (2000). Book access, shared reading, and audio models: The effects of supporting the literacy learning of linguistically diverse students in school and at home. *Journal of Educational Psychology, 92*, 23-36.	• 16 teachers and 162 first grade pupils. • Exploration of the impact of book-rich classroom environments and home re-reading with and without and audio model, on reading motivation, comprehension and fluency. • Classrooms with English as a first language and EAL students were in 1 of 4 conditions: book rich classroom environment, book rich classroom environment and daily re-reading at home, book rich classroom environment and daily re-reading at home with audiotapes, unmodified reading instructions at school. • Enhanced comprehension for book-rich classrooms, both with and without home reading. • Home-based re-reading increased reading motivation and parental involvement. • Audiotapes particularly good for EAL students.	STRONG

28. Dickinson, D. K., & Smith, M. W. (1994). Long-term effects of preschool teachers' book readings on low-income children's vocabulary and story comprehension. *Reading Research Quarterly, 29,* 104-122.	• Examination of patterns of talk about books in 25 classrooms for 4 year olds from low SES and relationships with their vocabulary growth and story understanding. • Videotapes of teacher-child interactions during book reading sessions were coded. • Cluster analysis used. • Three patterns of reading books: co-constructive, didactic-interactional, limited discussion. • One year after the book readings children were given tests of vocabulary and story understanding skill. • Larger gains by children in the co-constructive classrooms rather than in the other two conditions. • Strong effects on vocabulary and modest effects on story understanding.	STRONG
29. Ezell, H. K., & Justice, L. M. (2005). Shared storybook reading: Building young children's language and emergent literacy skills. Baltimore, MD: Paul H. Brookes.	• Review	MODERATE
30. Justice, L.M., & Ezell, H.K. (2002). Use of storybook reading to increase print awareness in at-risk children. *American Journal of Speech-Language Pathology, 11,* 17-29.	• Evaluation of the impact of participation in book-reading sessions with a print focus on print awareness in preschool children from low SES. • A book reading intervention was conducted for 30 children enrolled in Head Start. • Children were matched for CA and then randomly placed into an experimental or control group. • Pre-test measures of children's print awareness were administered. • Children in both groups participated in 24 small group reading sessions over an 8-week period. • Children in the experimental group participated in shared reading sessions that included a print focus and control-group children participated in shared reading sessions with a picture focus. • Post-test indicated that children who participated in print-focus reading sessions outperformed their control-group peers on three measures of print awareness and in terms of overall performance.	STRONG

31. Justice, L. M., Meier, J., & Walpole, S. (2005). Learning new words from storybooks: Findings from an intervention with at-risk kindergarteners. *Language, Speech, and Hearing Services in Schools, 36,* 17-32.	• 57 pre-school children – 29 treatment group, 28 comparison. • Treatment for vocabulary based on storybook reading sessions. • 60 random words targeted in elaborated v non-elaborated conditions. • Pre- and post-tests of definitions of targeted words. • Modest word learning gains reported. • Children in treatment groups made more gains in elaborated words when compared to control group (not on non-elaborated words). • Children with low vocabulary skills made most gains.	MODERATE
32. Justice, L. M., & Pence, K. (2005). Scaffolding with storybooks: A guide for enhancing young children's language and literacy achievement. Newark, DE: International Reading Association.	• Review	MODERATE
33. Huttenlocher, J., Vasilyeva, M., Cymerman, E., & Levine, S. C. (2002). Language input at home and at school: Relation to syntax. *Cognitive Psychology, 45,* 337–374.	• Proportion of parents' multiclause sentences was associated with children's mastery of multiclause sentences. Also association with parent and child use of noun phrases (based on CHILDES database of language samples of 34x 4 year olds and their parents). • Also there was an association between teachers' use of syntactically complex language and preschool children's syntactic growth over one year. (Sample of 40 classrooms with 305 children. Children completed language assessment at the start and end of one school year and teachers completed 1x 3 hour classroom observation in the middle of the school year).	STRONG
34. Justice, L. M., Mashburn, A. J., Hamre, B. K., & Pianta, R. C. (2008). Quality of language and literacy instruction in preschool classrooms serving at-risk pupils. *Early Childhood Research Quarterly, 23*, 51-68.	• 135 preschool classrooms – observed 83 literacy lessons and 52 language lessons. • Examined quality of language and literacy instruction. • Examined features such as conversations with adults, open-ended questions, repetition and extension, purposeful, explicit literacy focus. • Quality of language and literacy instruction was generally rated as low. • Attending language and literacy development workshops was a positive predictor.	STRONG

35. Mashburn, A. J., Justice, L. M., Downer, J. T., & Pianta, R. C. (2009). Peer effects on children's language achievement during pre-kindergarten. *Child Development, 80,* 686-702.	• Examination of associations between peers' expressive language abilities and children's development of receptive and expressive language among 1,812 four-year olds in 453 classrooms in 11 states. • Higher peer expressive language abilities were positively associated with children's development of receptive and expressive language. • The positive association between peers' expressive language abilities and children's receptive language development was stronger for children who began preschool with higher receptive language skills and within classrooms characterised by better classroom management.	STRONG
36. Justice, L.M., Petscher, Y., Schatschneider, C., & Mashburn, A. (2011). Peer effects in Preschool Classrooms: Is Children's Language Growth Associated with Their Classmates' Skills? *Child Development, 82*, 1768-1777.	• Peer effects were assessed for 338 children in 49 classrooms. • A significant interaction between the language skills of children's classmates and children's fall language skills indicated that peer effects were strongest for children with low language skills who were in classrooms that served children with relatively low skill levels, on average.	STRONG
37. Smith, M. W., & Dickinson, D. K. (1994). Describing oral language opportunities and environments in Head Start and other preschool classrooms. *Early Childhood Research Quarterly, 9,* 345-366.	• Tested the hypothesis that particular classroom circumstances (eg. Small group work), pedagogical orientations (e.g. desire to foster early literacy development) and activity settings (e.g. small group activities) will maximally facilitate the types of talk known to be predictive of later language and literacy development. • Data drawn from general demographic information, teacher interviews, and audiotapes of teachers' and children's spontaneous interaction in 61 classrooms. • Strong relationships were found between classroom circumstances and interactions, between pedagogical orientations and interactions and between activity settings and interactions.	STRONG
38. Silverman, R., & Hines, S. (2009). The effects of multimedia-enhanced instruction on the vocabulary of English-language learners and non-English language learners in pre-kindergarten through second grade. *Journal of Educational Psychology, 101,* 305–314.	• 85 children between 4;6 and 8;6 years. • 32% EAL. • Two types of vocabulary intervention – multimedia v non-multimedia. • 45min daily 3x week x12 weeks. • No effect of multi-media for non-EAL children (though no negative effect). • Significant effect of multimedia for children with EAL (gap between EAL and non-EAL closed on measures of vocabulary).	MODERATE
39. Gersten, R., & Baker, S. (2000). What do we know about effective instructional practices for English language learners? *Exceptional Children, 66,* 453–470.	• Results of a literature review of 9 intervention studies and 15 descriptive studies, in addition to 5 focus groups with practitioners.	MODERATE

40. Justice, L. M., Mashburn, A., Pence, K. L., & Wiggins, A. (2008). Experimental evaluation of a preschool language curriculum: Influence on children's expressive language skills. *Journal of Speech Language and Hearing Research, 51,* 983-1001.	• Training for preschool teachers – 7 trained (teaching 100 children), 7 control (teaching 98 children). • Structured observations following training 3x over academic year. • Measured children's growth in expressive language (% complex utterances, rate of noun use, number of different words). • Children who were exposed to the Language-Focused Curriculum following training and who had teachers who used language stimulation techniques such as open questions and recasts had accelerated language growth.	MODERATE
41. Girolametto, L., Weitzman, E., van Lieshout, R., & Duff, D. (2000). Directiveness in teachers' language input to toddlers and preschoolers in day care. *Journal of Speech, Language, and Hearing Research, 43,* 1101–1114.	• 5 types of directiveness were examined in the interactions of day care teachers with toddlers and preschool groups. • The instructional context (book reading, play dough) yielded significant differences across all 5 subtypes of directiveness.	MODERATE
42. Launonen, K. (1996). Enhancing communication skills of children with Down syndrome: Early use of manual signs. In S. von Tetzchner, & M. H. Jensen (Eds.), Augmentative and alternative communication: European perspectives. London: Whurr.	• Review	MODERATE
43. Remington, B., & Clarke, S. (1996). Alternative and augmentative systems of communication for children with Down syndrome. In J. Rondal, J. Perera, L. Nadel, & A. Comblain (Eds.), Down syndrome: Psychological, psychobiological and socio-educational perspectives. London: Whurr.	• Review	MODERATE

44. Girolametto, L., & Weitzman, E. (2002). Responsiveness of child care providers in interactions with toddlers and pre-schoolers. Language, *Speech and Hearing Services in Schools, 33*, 268-281.	• Exploratory study: investigation of responsive language input of 26 child care providers. • 3 subtypes of responsive interaction strategies were rated and compared across two age groups (toddlers, pre-schoolers) and two naturalistic contexts (book reading, play dough activity). • Caregiver-child interactions were rated using the Teacher Interaction and Language Rating Scale to provide information about the frequency of responsive language strategies. • Caregivers used similar levels of child-centred and interaction-promoting strategies with both age groups but used more labelling with toddlers and more topic extensions with pre-schoolers. • The context of the interaction influenced the caregivers' use of responsive strategies (play dough activity provided the most responsive input overall). • Strong positive relationship between all three subtypes of responsiveness and variation in the preschoolers' language productivity. • But only interaction-promoting strategies were positively related to measures of the toddlers' language productivity.	MODERATE
45. Cabell, S.Q., Justice, L.M., Piasta, S.B., Curenton, S.M., Wiggins, A., Turnbull, K.P., & Petscher, Y. (2011). The impact of teacher responsivity education on preschoolers' language and literacy skills. *American Journal of Speech-Language Pathology, 20,* 315-330.	• A) To examine the extent to which teacher responsivity education affected preschoolers' language and literacy development over an academic year B) To determine whether children's initial language abilities and teachers' use of responsivity strategies were associated with language outcomes. • RCT, 19 preschool settings (25 teachers, 174 children) assigned to a responsivity education intervention or 19 preschool settings (24 teachers, 156 children) assigned to 'business-as-usual' control condition. • Teachers in the experimental group received training focused on a set of strategies designed to promote children's engagement and participation. • No main effects on children's language skills although moderating effects were observed such that the intervention appeared to have positive effects for children with relatively high initial language abilities. • Teacher use of responsivity strategies was positively associated with vocabulary development. • Significant main effect of the intervention on print-concept knowledge.	STRONG

46. Girolametto, L., Weitzman, E., & Greenberg, J. (2006). Facilitating language skills – In-service education for early childhood educators and preschool teachers. *Infants and Young Children, 19,* 36-49.	• Evaluation of 2 day training for early years' educators. • 8 completed training, 8 in control group. • Those who completed training showed: more abstract utterances about emotions and past experiences when reading a storybook, had more print references in a follow-up task and elicited more appropriate responses from children compared to control group.	MODERATE
47. Girolametto, L., Weitzman, E., & Greenberg, J. (2003). Training day care staff to facilitate children's language. *American Journal of Speech-Language Pathology, 12,* 299-311.	• Exploratory study: 16 caregivers were randomly assigned to experimental and control groups. • Caregivers were taught to use a variety of language learning interaction strategies. • At post-test, the experimental group used 'good practice' strategies more than the control group. • Children in the experimental group talked more, produced more combinations, and talked to peers more often than the control group.	MODERATE
48. Tsybina, I., Girolametto, L., Weitzman, E., & Greenberg, J. (2006). Recasts used with preschoolers' learning English as their second language. *Early Childhood Education Journal, 34,* 177–185.	• Exploratory working with 16 early childhood educators. • Each educator was videoed while completing reading and play dough tasks with 4 preschool children learning English as an additional language (EAL) that the educators selected. • Results showed that educators rated children with EAL has having less developed expressive language than their peers but they recast information to all children at similar rates (recasts are semantic or syntactic revisions of utterances). • Children with lowest expressive language skills (8 children) had fewer uptakes of recasts than children who had higher expressive language skills plus EAL. • Authors recommend increasing the rate of recasts and reducing their complexity when working with children with EAL.	MODERATE
49. Vasilyeva, M., Huttenlocher, J., & Waterfall, H. (2006). Effects of language intervention on syntactic skill levels in preschoolers. *Developmental Psychology, 42,* 164–174.	• 72 four-year-olds listened to stories containing either a high proportion of passive voice sentences or a high proportion of active voice sentences. • Following 10 story sessions, children's production and comprehension of passives were assessed. • Intervention type affected performance-children who heard stories with passive sentences produced more passive constructions (and with fewer mistakes) and showed higher comprehension scores than children who heard stories with active sentences.	MODERATE

50. Peterson, C., Jesso, B., & McCabe, A. (1999). Encouraging narratives in preschoolers: An intervention study. *Journal of Child Language, 26*, 49–67.	• 20 preschool children (mean age 3;7) from economically disadvantaged backgrounds. • 10 assigned to intervention group, 10 in control group. • Intervention was aimed at mothers' use of narrative conversations, open-ended questions, and strategies to encourage loner narratives. • Children's narrative and vocabulary skills were assessed before and after yearlong intervention. In addition, 14/20 children followed up a year later. • Intervention children showed significant vocabulary improvement immediately after intervention terminated, and a year later they showed overall improvements in narrative skill. • In particular, intervention children produced more context-setting descriptions about where and especially when the described events took place.	MODERATE
51. McCathren, R. B., Yoder, P. J., & Warren, S. F. (1995). The role of directives in early language intervention. *Journal of Early Intervention, 19*, 91-101.	• 3 types of directives are defined, two conceptual models for the role of directives are then presented. • Research on which type supports language development (follow-in directives).	REVIEW / OTHER
52. Massey, S. L., Pence, K. L., Justice, L. M., & Bowles, R. P. (2008). Educators' use of cognitively challenging questions in economically disadvantaged preschool classroom. *Early Education and Development, 19,* 340-360.	• Investigation of the complexity of teacher questions in 14 preschool classrooms serving 4 year olds from low SES in order to explore the frequency and complexity of teacher questions and to determine the extent to which question types varied for different classroom contexts. • Using teacher utterances from 24-min transcripts of videotaped classroom observations, a logistic regression was used to determine the frequency of teacher questioning and the extent to which this related to classroom context. • Questions characterised 33.5% of all teacher utterances, with management questions occurring most frequently (44.8%), followed by more cognitively challenging questions (32.5%) and less cognitively challenging questions (22.7%). • Frequency of use for the different question types varied by classroom context: management questioning occurred most frequently in teacher-directed and child-directed contexts, whereas more cognitively challenging questions occurred more frequently during shared storybook reading.	MODERATE

53. Zucker, T.A., Justice, L.M., Piasta, S.B., & Kaderavek, J.N. (2010). Preschool teachers' literal and inferential questions and children's responses during whole-class shared reading. *Early Childhood Research Quarterly, 25,* 65-83.	• A) Investigation of the association among the level of literal and inferential language in the text, teachers' text-related questions, and children's responses using sequential analysis and B) Examination of the relation between teachers' inferential questioning and children's vocabulary outcomes. • 25 preschool teachers and 159 four-year-old children. • Teachers video-taped their whole class shared reading. • Teachers and children's talk was analysed and children completed standardised vocabulary assessment in autumn and spring of the academic year. • Inferential questions consistently elicited inferential child responses • Teachers' questions were associated with children's vocabulary outcomes.	STRONG
54. Childers, J. B., & Tomasello, M. (2002). Two-year-olds learn novel nouns, verbs, and conventional actions from massed or distributed exposures. *Developmental Psychology, 38,* 967-978.	• 2 year olds were taught 6 novel nouns, 6 novel verbs or 6 novel actions over 1 month. • In each condition children were exposed to some items in massed presentations (on a single day) and some in distributed presentations (over 2 weeks). • Children's comprehension and production was tested at 3 intervals after training. • In comprehension, children learned all types of items in all training conditions at all retention intervals. • For production: a)production was better for nonverbal actions than for either word type b) children produced more new nouns than verbs, c) production of words was better following distributed than massed exposure d) time to testing (immediate, 1 day, 1 week) did not affect retention. • Follow up study: the most important timing variable was the number of different days of exposure, with more days facilitating production.	STRONG
55. Wasik, B. A. (2006). Building vocabulary one word at a time. *Young Children, 61,* 70-78.	• Examines research into early vocabulary learning. • Covers basic theory of the social basis of acquiring new words, providing explanations, the role of literacy. Suggests strategies such as word walls, targeting specific words, extending word use, using props, and making connections between home and school.	REVIEW/DISCUSSION/ OTHER

56. Pearson, B. Z., Fernandez, S. C., Lewedeg, V., & Oller, D. K. (1997). The relation of input factors to lexical learning by bilingual infants. *Applied Psycholinguistics, 18,* 41–58.	• 25 bilingual infants were tested with differing patterns of exposure to the language being learned. • MacArthur Communicative Development Inventory and standardised parent report forms in Spanish and English were used. • Significant correlations between language exposure estimates and vocabulary learning were found.	INDICATIVE
57. De Rivera, C., Girolametto, L., Greenberg, J., & Weitzman, E. (2005). Children's responses to educators' questions in day care play groups. *American Journal of Speech-Language Pathology, 14,* 14-26.	• Exploratory study examining adults' questions to small groups of children to determine a) how questions influence their response rate and b) the complexity of their response. • 13 educators of toddlers and 13 educators of pre-schoolers were videotaped during free-play. • Both groups used an equivalent frequency of open ended questions but the preschool educators used more topic-continuing questions. • Pre-schoolers responded more frequently than toddlers. • Pre-schoolers used more multi-word utterances following open-ended questions and topic-continuing questions.	INDICATIVE
58. Chapman, R. S. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry, 41,* 33–54.	• Reviews interactionist perspective on children's language development. • Discusses the contributions of both nature and nurture to emergent, functional language systems.	REVIEW/OTHER
59. McKeown, M. G., Beck, I. L., Omanson, R. C., & Perfetti, C. A. (1983). The effects of long-term vocabulary instruction on reading comprehension. *Journal of Reading Behaviour, 15,* 3–18.	• 41 participating children and 41 children in control group 9-10 years old. • Taught 104 words over 75 lessons (30 min per lesson over five-month period). • Pre- and post-intervention testing and comparison with control group. Also had control list of non-taught words. • Post-test improvement in accuracy of knowledge of words (as measured by a multiple-choice vocabulary test with definitions) – children who received intervention scored significantly higher than the control group. • Text comprehension also improved for children who had received intervention. • Control and intervention groups of children performed equally poorly on a test of words which were not targeted in intervention.	MODERATE
60. Dockrell, J. E., & Messer, D. (2004). Lexical acquisition in the school years. In R. Berman (Ed.), Language development: Psycholinguistic and typological perspectives. New York: John Benjamins.	• Review	MODERATE

61. Parsons, S., Law, J., & Gascoigne, M. (2005). Teaching receptive vocabulary to children with specific language impairment: a curriculum-based approach. *Child Language Teaching and Therapy, 21,* 39-59.	• Case studies of two children with SLI. • Boys aged 8;10 and 9;5. • Mathematical vocabulary – 9 words taught over 8 weeks and 9 control words. • Semantic and phonological methods. • Reassessment following intervention. • Treatment and non-treatment words compared, both improved. • No change in standardised vocabulary tests post-treatment.	INDICATIVE
62. Brigman, G. A., & Webb, L. D. (2003). Ready to Learn: Teaching Kindergarten Students School Success Skills. *Journal of Educational Research, 96*, 286-292.	• Evaluation of 'Ready to Learn' curriculum in 12 kindergarten classes (260 students) in 3 demographically similar schools. • Teachers were trained to deliver the curriculum and 5 specific teaching strategies for use throughout the day. • Students who received the intervention scored significantly higher than did comparison students on a listening comprehension measure and a student behaviour rating scale.	STRONG

Appendix 3

2012

BETTER COMMUNICATION RESEARCH PROGRAMME

Dockrell, J. E., Bakopoulou, I., Law, J., Spencer, S., & Lindsay G.

School:

Date:

Completed by:

Class:

No pupils:

No staff (excluding observer):

COMMUNICATION SUPPORTING CLASSROOMS OBSERVATION TOOL

- The observation checklist below is designed to be used in an observation of a classroom or a learning space.
- The observation checklist can be used in Reception, Year 1 and Year 2 classrooms and learning spaces.
- The average length of time necessary to collect a representative sample of behaviour is one hour. The recording of the first dimension (Language Learning Environment) can be done during break time or school assembly.
- It is recommended that the observation takes place during a regular classroom session (usually a morning session starting with the class register).
- The language learning dimensions are recorded as either present or absent during the observation. For some items, there is a record of a Language Learning Opportunity being 'Present' and being 'Used during the Observation'.
- For the dimensions of 'Language Learning Opportunities' and 'Language Learning Interactions', each different occurrence is recorded up to a maximum of 5 times during the observation period. Each recorded observation is a new/different occurrence of the behaviour/activity.

COMMUNICATION SUPPORTING CLASSROOMS OBSERVATION TOOL (DOCKRELL, J.E., BAKOPOULOU, I., LAW, J., & SPENCER, S. FOR THE BCRP)

DIMENSIONS		NOT SEEN	OBSERVED		COMMENTS
LANGUAGE LEARNING ENVIRONMENT	*This dimension involves the physical environment and learning context*				
1	The classroom is organised to emphasise open space.				
2	Learning areas are clearly defined throughout the classroom.				
3	Learning areas are clearly labelled with pictures/words throughout the classroom.				
4	There is space for privacy or quiet areas where children can retreat to have 'down time' or engage in smaller group activities. These areas are less visually distracting.				
5	Children's own work is displayed and labelled appropriately.				
6	Some classroom displays include items that invite comments from children.				
7	Book specific areas are available.				
8	Literacy specific areas are available.				
9	Background noise levels are managed consistently throughout the observation, and children and adults are able to hear one another with ease.				
10	Transition times are managed effectively, so that noise levels are not excessive and children know what to expect next.				
11	There is good light.				
12	The majority of learning resources and materials are labelled with pictures/words.				
13	Resources that are available for free play are easily reached by the children or easily within their line of vision.				
14	An appropriate range of books is available in the book area (for example, traditional stories, bilingual/dual language books and a variety of genres and books related to children's own experiences).				
15	Non-fiction books, books on specific topics or interests of the children are also available in other learning areas.				
16	Outdoor play (if available) includes imaginative role play.				
17	Good quality toys, small world objects and real / natural resources are available.		Present:	Used:	
18	Musical instruments and noise makers are available.		Present:	Used:	
19	Role play area is available.		Present:	Used:	
TOTAL LLE SCORE:	**/19**				

DIMENSIONS		Not Seen	Observed (5 times)					COMMENTS
LANGUAGE LEARNING OPPORTUNITIES	*This dimension involves the structured opportunities that are present in the classroom to support language development*							
1	Small group work facilitated by an adult takes place.							
2	Children have opportunities to engage in interactive book reading facilitated by an adult (for example: asking predictive questions, joining in with repetitions, story packs etc.).							
3	Children have opportunities to engage in structured conversations with teachers and other adults.							
4	Children have opportunities to engage in structured conversations with peers (Talking partners).							
5	Attempts are made to actively include all children in small group activities.							
TOTAL LLO SCORE:	**/5**							

DIMENSIONS		Not Seen	Observed					Observed By All Staff in Classroom	COMMENTS
LANGUAGE LEARNING INTERACTIONS	*This dimension involves the ways in which adults in the setting talk **with** children.*								
1	Adults use children's name, draw attention of children.								
2	Adults get down to the child's level when interacting with them.								
3	Natural gestures and some key word signing are used in interactions with children.								
4	Adults use symbols, pictures and props (real objects) to reinforce language.								
5	Pacing: Adult uses a slow pace during conversation; give children plenty of time to respond and take turns in interacting with them.								
6	Pausing: Adult pauses expectantly and frequently during interactions with children to encourage their turn-taking and active participation.								
7	Confirming: Adult responds to the majority of child utterances by confirming understanding of the child's intentions. Adult does not ignore child's communicative bids.								
8	Imitating: Adult imitates and repeats what child says more or less exactly.								
9	Commenting: Adult comments on what is happening or what children are doing at that time.								
10	Extending: Adult repeats what child says and adds a small amount of syntactic or semantic information.								
11	Labelling: Adult provides the labels for familiar and unfamiliar actions, objects, or abstractions (e.g. feelings).								

12	Adult encourages children to use new words in their own talking.								
13	Open questioning: Adult asks open-ended questions that extend children's thinking (what, where, when, how & why questions).								
14	Scripting: Adult provides a routine to the child for representing an activity (e.g. First, you go up to the counter. Then you say 'I want milk.') and engages the child in known routines (e.g. 'Now it is time for circle time. What do we do first?').								
15	Adult provides children with choices (for example: 'Would you like to read a story or play on the computer?').								
16	Adult uses contrasts that highlight differences in lexical items and in syntactic structures.								
17	Adult models language that the children are not producing yet.								
18	Turn-taking is encouraged.								
19	Children's listening skills are praised.								
20	Children's non-verbal communication is praised.								
TOTAL LLI SCORE:	**/20**								

Appendix 4

COMMUNICATION SUPPORTING CLASSROOMS OBSERVATION TOOL (DOCKRELL, J.E., BAKOPOULOU, I., LAW, J., & SPENCER, S. FOR THE BCRP)

DIMENSIONS	EXAMPLES	NOTES
LANGUAGE LEARNING ENVIRONMENT	*This dimension involves the physical environment and learning context.*	
The classroom is organised to emphasise open space.[1,4,6]		
Learning areas are clearly defined throughout the classroom.[1, 2,3,4,5,6,7,8,12]	Different learning areas, such as small world play, reading corner, maths area, construction, topic table, computer area are available within the classroom.	
Learning areas are clearly labelled with pictures/words throughout the classroom. [1, 2,3,4,5,6,7,8,12]	Symbols and pictures are used to label different areas, such as the kitchen and book areas.	
There is space for privacy or quiet areas where children can retreat to have 'down time' or engage in smaller group activities. These areas are less visually distracting.[1,3,4,5,6,7,8]	There is a big tent for children to go into with a book. A corner of the classroom has an entrance like a castle.	This item is specifically for quiet spaces. Classrooms may have spaces such as a house corner, hospital area, or growing station. While these are interesting learning areas, they do not get a score for this item.

GUIDANCE ON COMPLETING COMMUNICATION SUPPORTING CLASSROOMS OBSERVATION TOOL

- The observation checklist below is designed to be used in an observation of a classroom or a learning space.
- The observation checklist can be used in Reception, Year 1 and Year 2 classrooms and learning spaces.
- The average length of time necessary to collect a representative sample of behaviour is one hour. The recording of the first dimension (Language Learning Environment) can be done during break time or school assembly.
- It is recommended that the observation takes place during a regular classroom session (usually a morning session starting with the class register).
- The language learning dimensions are recorded as either present or absent during the observation. For some items, there is a record of a Language Learning Opportunity being 'Present' and being 'Used during the Observation'.
- For the dimensions of 'Language Learning Opportunities' and 'Language Learning Interactions', each different occurrence is recorded up to a maximum of 5 times during the observation period. Each recorded observation is a new/different occurrence of the behaviour/activity.

Children's own work is displayed and labelled appropriately. [5,6,7,8]	Self-portraits with labels and descriptions. Children's drawings, potato prints.	
Some classroom displays include items that invite comments from children. [5,6,7,8]	Can you order your numbers here? How much did you enjoy our trip to the zoo? Children are encouraged to rate the trip using stars.	This item refers to displays which have space for children to contribute.
Book specific areas are available. [1, 3,4,5,6,7,8]	Book displays, shelves within easy reach.	
Literacy specific areas are available. [1, 3,4,5,6,7,8]	Desks with paper, whiteboards, pens and books to practise spelling, handwriting or reading.	Literacy specific areas may include materials for writing or practicing handwriting.
Background noise levels are managed consistently throughout the observation, and children and adults are able to hear one another with ease. [4,6,9,10,11]	Noise levels are managed well throughout the observation. Soft music playing in the background during free play.	
Transition times are managed effectively, so that noise levels are not excessive and children know what to expect next. [4,5,7,9,10,11]	The adult rings a bell and all children stop and put both hands in the air and wait for instructions. Adult warns the children they have five more minutes before assembly. A tambourine is used to signal the children have to wait and listen for the next instruction.	
There is good light. [4,5,6,8,12]		
The majority of learning resources and materials are labelled with pictures/words. [4,5,6,7,13]		
Resources that are available for free play are easily reached by the children or easily within their line of vision. [4,5,6,7,8]	Blocks, play dough, toy animals, number lines within easy reach.	
An appropriate range of books is available in the book area (for example, traditional stories, bilingual/dual language books and a variety of genres and books related to children's own experiences). [13]		
Non-fiction books, books on specific topics or interests of the children are also available in other learning areas. [13]	Books on dinosaurs. Books on transportation. Space and the universe books and props.	
Outdoor play (if available) includes imaginative role play. [7,8,37]	Children dressed up as construction workers (hi vis jackets and hard hats) for break outside. Home corner available outdoors.	
Good quality toys, small world objects and real / natural resources are available. [1, 2,4,5,6,7,8,37]	Zoo toys, shells, pebbles, seeds. Castle set and toys related to topic.	
Musical instruments and noise makers are available. [1, 2,4,5,6,7,8,37]	Adult uses the tambourine to get children's attention. Adult plays the guitar during story time. Children take turns to use the wooden flutes while the adult reads a story. Concept of pitch is explored using bells.	
Role play area is available. [1, 2,4,5,6,7,8,37]	Kitchen area. Puppets and soft animals used for imaginary play.	

	In the kitchen area there are different outfits for children to wear. Castle costumes in the class (e.g. knight and princess).	

DIMENSIONS	EXAMPLES	NOTES
LANGUAGE LEARNING OPPORTUNITIES	*This dimension involves the structure opportunities that are present in the setting to support language development.*	
Small group work facilitated by an adult takes place. [16, 17, 18, 19,58]	Phonics groups (children grouped by ability). Letter-sound matching activity within small groups. Numeracy activities. Children complete writing tasks, sitting on different tables according to ability (labelled by different animal names) with adult support.	It is important that in these small groups the adult is actively involved with the children supporting the tasks.
Children have opportunities to engage in interactive book reading facilitated by an adult (for example: asking predictive questions, joining in with repetitions, story packs etc.). [14,15, 17, 19, 20, 21, 25, 26, 27, 28, 29,30, 31, 32,58]	Teacher reads two books brought in by a child from home. During the reading she asks two questions ('Why would Mr Stick be scared of a dog?' 'What are baby butterflies?') which are open ended.	
Children have opportunities to engage in structured conversations with teachers and other adults. [19, 20, 21, 22, 23, 24, 33,34,58]	Adult sits at the free play tables and answer children's questions, comments on their activities, asks questions and follows up conversation. Children approach adult with news about family, adult asks questions and comments, relating to background knowledge of prior events. Show and Tell carpet time includes questions that require from the child to provide more information on the object.	Conversations are structured by following the child's lead, attending to the child and talking about what the child is doing or is interested in with an emphasis on taking turns.
Children have opportunities to engage in structured conversations with peers (Talking partners). [35, 36,58]	Children discuss a topic with the child sitting next to them during carpet time and give a joint answer to the whole-group. Children work in pairs – one describes a geographical shape while the other guesses which shape they are thinking of.	Children are given prompts and support by adults to engage in a specific conversation about the current topic.
Attempts are made to actively include all children in small group activities. [23,37,58,62]	Less talkative children are identified by adults, who invite them to sit on their knee to have a conversation. Additional modification of language is used by adults to include less-talkative children in whole-class discussions.	

DIMENSIONS	EXAMPLES	NOTES
LANGUAGE LEARNING INTERACTIONS	*This dimension involves the ways in which adults in the setting talk **with** children.*	
Adults use children's name, draw attention of children. [1,38,39,40,41,44,45,46,47]	Adult says the name of each child before giving them a counting task (e.g. Sarah – 3+4!) During greetings at the start of the day. Adult uses the child's name to get their attention *before* asking them a specific question during 'show and tell' session.	If an adult does this repetitively during one activity (e.g. a counting task), but does not use this strategy during the rest of the session, you may wish to count the incidence as 'once' (rather than counting the individual occurrences within the one task).
Adults get down to the child's level when interacting with them. [1,38,39,40,41,44,45,46,47]	Adult sits on the carpet with the children to complete maths activity. Adult sits on small chairs designed for children during free activity time.	
Natural gestures and some key word signing are used in interactions with children. [39,40,41,42,43,44,45,46,47]	Thumbs up. Use a gesture for 'big' (tower). Use the 'where' Makaton sign. Gestured when saying 'I can see a long way'. Fingers to signal 3 hats. Five minutes (hand gesture for 5). Knock it over (gesture for knock!). When instructing in an ICT lesson, teachers use gestures for up/down/left/right/high/low. Iconic gestures are used, e.g. gesture for 'cliff' (in discussion of what an edge is in maths lesson).	
Adults use symbols, pictures and props (real objects) to reinforce language. [1]	Visual timetable displayed, with a focus on a child who has recently moved to the area from abroad and a child with ASD. Pointing at pictures when reading a story. Holding a wooden train toy and referring to it when talking about transportation.	
Pacing: Adults use a slow pace during conversation; give children plenty of time to respond and take turns in interacting with them. [1,19,21,34,39,40,41,44,45,46,47]	When explaining how to log on to the computers, the adult takes lots of pauses and talks slowly to ensure that children are following the conversation.	
Pausing: Adults pause expectantly and frequently during interactions with children to encourage their turn-taking and active participation. [1,19,21,44,45,46,47]	Counting activity '– 2, 4, 6 .....!' A: 'How do we call this? It's a..... pancake!' A: 'What day is it today, do you know?.... It was Monday yesterday so it's..... Today is - Tuesday!'	
Confirming: Adults respond to the majority of child utterances by confirming understanding of the child's intentions. Adults do not ignore child's communicative bids. [1,19,44,45,46,47,48]	Adult confirms if answer to counting was correct? Child: 'My grandmother has rabbits in her garden'. Adult: 'That sounds interesting, tell me about the rabbits later' Child: 'Look Miss!' Adult: 'Oh look what you've done! He's made a car!' Child:' Miss, look at my star!' Adult: 'Oh wow...this is a big bright star!'	

Imitating: Adults imitate and repeat what child says more or less exactly. [1,19,44,45,46,47,48]	Child: 'It is my sister's birthday on Saturday'. Adult: 'Is it really her birthday? How exciting'. Child: 'Miss look at my tower'. Adult: 'Oh wow…look at your tower!'	
Commenting: Adults comment on what is happening or what children are doing at that time. [1,19,44,45,46,47,49,50, 51]	Adult: 'Charlie, that's a great design'. Adult: 'A spider! Your favourite animal!' Adult: 'I like the way Alfie and Tiana put all the blocks together to build a really tall tower.' Adult: 'I can see what you're doing, you're trying to copy.'	In order to be scored, the adult's comment should be directed at the child(ren) and be about the immediate situation.
Extending: Adults repeat what child says and add a small amount of syntactic or semantic information. [1,19,44,45,46,47,48,49,50, 51]	Child: 'Because Cinderella was scared of her sisters'. Adult: 'That's right. Cinderella was scared of her two horrible sisters'. Child: 'My mummy brought me here'. Adult: 'Your mummy's brought you here has she? She's seen you to the gate. Here she is!' Child: 'Chimney house'. Adult: 'Chimney that's like the one we saw when we went on our walk' Child: 'Look at my dress'. Adult: 'It's a very beautiful summer dress'.	
Labelling: Adults provide the labels for familiar and unfamiliar actions, objects, or abstractions (e.g. feelings). [54,55,56,58,59,60]	Child: 'I need to be careful.' Adult: 'That's right. You need to be precise' Adult: 'What's another word for punch? (Pause) Starts with 'h' Adult: 'When someone doesn't feel excited in a nice way, we say they feel…(pause) upset'. The adult describes the word octagon in relation to an octopus. Introduces the words pentagon, cylinder, cuboids, and cone.	
Adults encourage children to use new words in their own talking. [54,55,56,58,59,60]	What's another word for that...? Submarine (what did we call that one again?) Child: 'They rhyme'. Adult: 'That's right. We learnt about rhyming in the morning'.	
Open questioning: Adults ask open-ended questions that extend children's thinking (what, where, when, how & why questions). [1,19,44,45,46,47,52,53,57,58]	How does it change from one to another? What did you like about the way Tiara read the story? What do you know about a giant's house? Why do you think they might be hot? How's it different to a square? And what's this book about?	
Scripting: Adults provide a verbal routine to the child for representing an activity (e.g. First, you go up to the counter. Then you say 'I want milk..') and engage the child in known routines (e.g. 'Now it is time for circle time. What do we do first?'). [1,19,44,45,46,47,58]	When we do a book review, we say 'I gave Cinderella three stars because…'	Scripts provide children with accurate verbal information about those situations or activities they may encounter. The situation or activity is described in detail providing the child with a script of what to say or do, what might be expected of him them and why. This item should not be scored if the adult just gives directions (e.g. Adult: 'Now go to your tables and start the task').
Adults provide children with choices (for example: 'Would you like to read a story or play on the computer?'). [1]	Do you want to go outside or go on the computer? Do you want to show us a magic trick or tell us about last night (in Show and Tell)?	

Adults use contrasts that highlight differences in lexical items and in syntactic structures.[51,54,55,56,58,59,60,61]	Amphibian crafts versus hovercrafts! Smaller v smallest. That's not just a car, it's like a minibus! Hammer doesn't start with d, that would be dammer The adult explains to the children the meaning of the words content and index. Face versus Side Sophia versus spear versus sphere! Discusses a face of a circle versus a face of a 2d shape in maths.	
Adults model language that the children are not producing yet.[58]	What are the properties of the shape?	Adults may use a word or sentence structure which you would not expect of a child in key stage 1. In order to score on this item, consider if the adult is using language which is within the child's zone of proximal development – e.g. is the language use helping develop children's language skills? Or is it too complex to be accessed by children of this age range (in which case, do not score a point)?
Turn-taking is encouraged. [1,62]	Adult: 'We are working as a team - doing it all together. Now it's my turn, then it's Amber's turn.' Adult: 'Let's take it in turns to think of a word to describe the monster.'	
Children's listening skills are praised. [1,62]	Adult: 'That's very good listening.' Adult: 'I can tell you are listening to me by the way you all look at me when I explain the task. Great listening!'	This item is scored if listening is explicitly praised. It does not include praise for being quiet (e.g. 'this class is really quiet – good work' would not be scored) or discipline for poor listening (e.g. 'I wish there was more listening going on in here today!'). You may wish to note any positive strategies that the adults use to encourage good listening.
Children's non-verbal communication is praised. [1,62]	Adults: 'I like the way you look at me when I explain the exercise. It makes me think you are really listening at me'	

References

1. Justice, L.M. (2004). Creating Language-Rich Preschool Classroom Environments. *Teaching Exceptional Children,* 36-44.
2. Justice, L. M., MCGinty, A., Guo, Y., & Moore, D. (2009). Implementation of responsiveness to intervention in early education settings. *Seminars in Speech and Language, 30*(2), 59-74.
3. Bond, M. A., & Wasik, B. A. (2009). Conversation Stations: Promoting Language Development in Young Children. *Early Childhood Educational Journal, 36,* 467-473.
4. Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the *early years. London: DFES.*
5. Harms, T., Clifford, R. M., & Cryer, D. (1996). *Early Childhood Environment Rating Scale - Revised (ECERS-R).* London: Teachers College Press.
6. Sylva, K, Siraj-Blatchford, I., Taggart, B. (2006). *Assessing Quality in the Early Years: Early Childhood Environmental Rating Scale – Extension (ECERS-E).* Stoke-on Trent, UK and Sterling, USA: Trentham Books.
7. I CAN (2008). I Can Early Talk: A Supportive Service for Children's Communication. Accreditation Standards.
8. Communication Trust (2008). The Speech, Language and Communication Framework. http://communicationhelppoint.org.uk
9. Dockrell, J. E., & Shield, B. M. (2004). Children's perception of their acoustic environment at home and at school. *Journal of the Acoustical Society of America, 115,* 2964-2973.
10. Shields, B.M., & Dockrell, J.E. (2008). The effects of environmental and classroom noise on the academic attainments of primary school children. *Journal of the Acoustical Society of America, 123*(1), 133-144.
11. Dockrell, J. E., & Shield, B. M. (2006). Acoustical barriers in classrooms: the impact of noise on performance in the classroom. *British Educational Research Journal, 32*(3)*,* 509-525.
12. Building Bulletin 87, BB 87, Guidelines for Environmental Design in Schools (DCSF) http://teachernet.gov.uk/energy
13. Dowhower, S. L., & Beagle, K. G. (1998). The print environment in kindergartens: A study of conventional and holistic teachers and their classrooms in three settings. *Reading Research and Instruction, 37*(3), 161-190.
14. Justice, L.M., Kaderavek, J.N., Fan, X., Sofka, A., & Hunt, A. (2009). Accelerating Preschoolers' Early Literacy Development Through Classroom Based Teacher-Child Storybook Reading and Explicit Print Referencing. *Language Speech and Hearing Services in Schools, 40*(1), 67-85.
15. Mol, S., Bus, A., & de Jong, M. (2009). Interactive book reading in early education: A tool to stimulate print knowledge as well as oral language. *Review of Educational Research, 79,* 979–1007.
16. Wasik, B. A. (2008). When fewer is more: Small groups in early childhood classrooms. *Early Childhood Education Journal, 35,* 515-521.
17. Morrow, L. M., & Smith, J. K. (1990). The effects of group size on interactive storybook reading. *Reading Research Quarterly, 25,* 213-231.
18. Turnbull, K. P., Anthony, A. B., Justice, L., & Bowles, R. (2009). Preschoolers' exposure to language stimulation in classrooms serving at-risk children: The contribution of group size and activity context. *Early Education and Development, 20*(1)*,* 53-79.
19. Dockrell, J. E., Stuart, M., & King, D. (2010). Supporting early oral language skills for English language learners in inner city preschool provision. *British Journal of Educational Psychology, 80*(4)*,* 497-515.
20. Saunders, W. M., & Goldenberg, C. (1999). Effects of instructional conversations and literature logs on limited- and fluent-English-proficient students' story comprehension and thematic understanding. *Elementary School Journal, 99*(4)*,* 277–301.
21. Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classrooms. *Reading Research Quarterly, 39*, 188–215.
22. Bickford-Smith, A., Wijayatilake, L., & Woods, G. (2005). Evaluating the Effectiveness of an Early Years Language Intervention. *Educational Psychology in Practice, 21*(3)*,* 161-173.
23. Best, W., Melvin, D., & Williams, S. (1993). The effectiveness of communication groups in day nurseries. *European Journal of Disordered Communication, 28,* 187–212.
24. NICHD Early Child Care Research Network (2000). The relation of child care to cognitive and language development. *Child Development, 71*, 960–980.
25. Collins, M. (2010). ELL preschoolers' English vocabulary acquisition from story book reading. *Early Childhood Research Quarterly, 25,* 84–97.

26. Hargrave, A. C., & Sénéchal, M. (2000). A book reading intervention with preschool children who have limited vocabularies: The benefits of regular reading and dialogic reading. *Early Childhood Research Quarterly, 15*, 75–90.
27. Koshinen, P. S., Blum, I. H., Bisson, S. A., Phillips, S. M., Creamer, T. S., & Baker, T. K. (2000). Book access, shared reading, and audio models: The effects of supporting the literacy learning of linguistically diverse students in school and at home. *Journal of Educational Psychology, 92*(1)*,* 23-36.
28. Dickinson, D. K. (2001). Book reading in preschool classrooms: Is recommended practice common? In D. K. Dickinson & P. O. Tabors (Eds.), *Beginning literacy with language: Young children learning at home and school* (pp. 175-203). Baltimore: Brookes Publishing Company.
29. Ezell, H.K., & Justice, L. M. (2005). *Shared storybook reading: Building young children's language and emergent literacy skills.* Baltimore, MD: Paul H. Brookes.
30. Justice, L.M., & Ezell, H.K. (2002). Use of storybook reading to increase print awareness in at-risk children. *American Journal of Speech-Language Pathology, 11*(1), 17-29.
31. Justice, L. M., Meier, J., & Walpole, S. (2005). Learning new words from storybooks: Findings from an intervention with at-risk kindergarteners. *Language, Speech, and Hearing Services in Schools, 36*, 17-32.
32. Justice, L. M., & Pence, K. (2005). *Scaffolding with storybooks: A guide for enhancing young children's language and literacy achievement*. Newark, DE: International Reading Association.
33. Huttenlocher, J., Vasilyeva, M., Cymerman, E., & Levine, S. C. (2002). Language input at home and at school: Relation to syntax. *Cognitive Psychology, 45*, 337–374.
34. Justice, L. M., Mashburn, A. J., Hamre, B. K., & Pianta, R. C. (2008). Quality of language and literacy instruction in preschool classrooms serving at-risk pupils. *Early Childhood Research Quarterly, 23*(1)*,* 51-68.
35. Mashburn, A. J., Justice, L. M., Downer, J. T., & Pianta, R. C. (2009). Peer effects on children's language achievement during pre-kindergarten. *Child Development, 80*(3), 686-702.
36. Justice, L.M., Petscher, Y., Schatschneider, C., & Mashburn, A. (2011). Peer effects in Preschool Classrooms: Is Children's Language Growth Associated with Their Classmates' Skills? *Child Development, 82*(6)*,* 1768-1777.
37. Smith, M. W., & Dickinson, D.K. (1994). Describing oral language opportunities and environments in Head Start and other preschool classrooms. *Early Childhood Research Quarterly, 9*, 345-366.
38. Silverman, R., & Hines, S. (2009). The effects of multimedia-enhanced instruction on the vocabulary of English-language learners and non-English language learners in pre-kindergarten through second grade. *Journal of Educational Psychology, 101*, 305–314.
39. Gersten, R., & Baker, S. (2000). What do we know about effective instructional practices for English language learners? *Exceptional Children, 66,* 453–470.
40. Justice, L. M., Mashburn, A., Pence, K. L., & Wiggins, A. (2008). Experimental evaluation of a preschool language curriculum: Influence on children's expressive language skills. *Journal of Speech Language and Hearing Research, 51*(4)*,* 983-1001.
41. Girolametto, L., Weitzman, E., van Lieshout, R., & Duff, D. (2000). Directiveness in teachers' language input to toddlers and preschoolers in day care. *Journal of Speech, Language, and Hearing Research, 43*, 1101–1114.
42. Launonen, K. (1996). Enhancing communication skills of children with Down syndrome: Early use of manual signs. In S. von Tetzchner, & M. H. Jensen (Eds.), *Augmentative and alternative communication: European perspectives*. London: Whurr.
43. Remington, B., & Clarke, S. (1996). Alternative and augmentative systems of communication for children with Down syndrome. In J. Rondal, J. Perera, L. Nadel, & A. Comblain (Eds.), *Down syndrome: Psychological, psychobiological and socio-educational perspectives.* London: Whurr.
44. Girolametto, L., & Weitzman, E. (2002). Responsiveness of child care providers in interactions with toddlers and pre-schoolers. *Language, Speech and Hearing Services in Schools, 33*, 268-281.
45. Cabell, S.Q., Justice, L.M., Piasta, S.B., Curenton, S.M., Wiggins, A., Turnbull, K.P., & Petscher, Y. (2011). The impact of teacher responsivity education on preschoolers' language and literacy skills. *American Journal of Speech-Language Pathology, 20*(4)*,* 315-330.
46. Girolametto, L., Weitzman, E., & Greenberg, J. (2006). Facilitating language skills – In-service education for early childhood educators and preschool teachers. *Infants and Young Children,* 19(1),36-49.
47. Girolametto, L., Weitzman, E., & Greenberg, J. (2003). Training day care staff to facilitate children's language. American *Journal of Speech-Language Pathology, 12*(3)*,* 299-311.
48. Tsybina, I., Girolametto, L., Weitzman, E., & Greenberg, J. (2006). Recasts used with preschoolers' learning English as their second language. *Early Childhood Education Journal, 34,* 177–185.

49. Vasilyeva, M., Huttenlocher, J., & Waterfall, H. (2006). Effects of language intervention on syntactic skill levels in preschoolers. *Developmental Psychology, 42*, 164–174.
50. Peterson, C., Jesso, B., & McCabe, A. (1999). Encouraging narratives in preschoolers: An intervention study. *Journal of Child Language, 26*, 49–67.
51. McCathren, R. B., Yoder, P. J., & Warren, S. F. (1995). The role of directives in early language intervention. *Journal of Early Intervention, 19*, 91-101.
52. Massey, S. L., Pence, K. L., Justice, L. M., & Bowles, R. P. (2008). Educators' use of cognitively challenging questions in economically disadvantaged preschool classroom. *Early Education and Development, 19*(2), 340-360.
53. Zucker, T.A., Justice, L.M., Piasta, S.B., & Kaderavek, J.N. (2010). Preschool teachers' literal and inferential questions and children's responses during whole-class shared reading. *Early Childhood Research Quarterly, 25*(1), 65-83.
54. Childers, J. B., & Tomasello, M. (2002). Two-year-olds learn novel nouns, verbs, and conventional actions from massed or distributed exposures. *Developmental Psychology, 38*, 967-978.
55. Wasik, B. A. (2006). Building vocabulary one word at a time. *Young Children, 61*(6), 70-78.
56. Pearson, B. Z., Fernandez, S. C., Lewedeg, V., & Oller, D. K. (1997). The relation of input factors to lexical learning by bilingual infants. *Applied Psycholinguistics, 18,* 41–58.
57. De Rivera, C., Girolametto, L., Greenberg, J., & Weitzman, E. (2005). Children's responses to educators' questions in day care play groups. *American Journal of Speech-Language Pathology, 14*(1), 14-26.
58. Chapman, R. S. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry, 41*, 33–54.
59. McKeown, M. G., Beck, I. L., Omanson, R. C., & Perfetti, C. A. (1983). The effects of long-term vocabulary instruction on reading comprehension. *Journal of Reading Behaviour, 15,* 3–18.
60. Dockrell, J. E., & Messer, D. (2004). Lexical acquisition in the school years. In R. Berman (Ed.), *Language development: Psycholinguistic and typological perspectives.* New York: John Benjamins.
61. Parsons, S., Law, J., & Gascoigne, M. (2005). Teaching receptive vocabulary to children with specific language impairment: a curriculum-based approach. *Child Language Teaching and Therapy, 21*(1), 39-59.
62. Brigman, G. A., & Webb, L. D. (2003). Ready to Learn: Teaching Kindergarten Students School Success Skills. *Journal of Educational Research, 96*(5), 286-292.

Appendix 5

School Details of the Feasibility Study June 2011 – March 2012

Area	No of Schools T1	No of Classroom Observations	No of Schools T2	No of Classroom Observations
South East England				
Greenwich	3	3 Reception Classrooms 2 Year One Classrooms 1 Year Two Classroom	3	3 Reception Classrooms 2 Year One Classrooms 1 Year Two Classroom
Hertfordshire	1	1 Year One Classroom	1	1 Year One Classroom
Lewisham	5	3 Reception Classrooms 4 Year One Classrooms 5 Year Two Classrooms	5	3 Reception Classrooms 4 Year One Classrooms 5 Year Two Classrooms
Total	*9*	*19 Classroom Observations*		*7 Classroom Observations*
Intervention Schools South England				
Kent	4 Intervention Schools 3 Comparison Schools	4 Reception Classrooms 3 Year One Classrooms 2 Year Two Classrooms 3 Reception Classrooms 2 Year One Classrooms 2 Year Two Classrooms	4 Intervention Schools 3 Comparison Schools	4 Reception Classrooms 3 Year One Classrooms 2 Year Two Classrooms 3 Reception Classrooms 2 Year One Classrooms 2 Year Two Classrooms
Total	*7*	*16 Classroom Observations*	*7*	*18 Classroom Observations*
North England				
Sunderland	1	1 Reception Classrooms 1 Year One Classrooms 1 Year Two Classrooms	1	1 Reception Classrooms 1 Year One Classrooms 1 Year Two Classrooms
Newcastle	3	3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms	3	3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms
Durham	2	4 Reception Classrooms 2 Year One Classrooms	2	4 Reception Classrooms 2 Year One Classrooms
Northumberland	3	3 Reception Classrooms 3 Year One Classrooms 2 Year Two Classrooms	2	2 Reception Classrooms 2 Year One Classrooms 1 Year Two Classroom
Total	*9*	*26 Classroom Observations*	*8*	*23 Classroom Observations*
Intervention Schools North England				
Kirkby	3 Intervention Schools 3 Comparison Schools	3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms 3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms	3 Intervention Schools 3 Comparison Schools	3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms 3 Reception Classrooms 3 Year One Classrooms 3 Year Two Classrooms
Rochdale	4 Intervention Schools 4 Comparison Schools	4 Reception Classrooms 4 Year One Classrooms 2 Year Two Classrooms 4 Reception Classrooms 4 Year One Classrooms 4 Year Two Classrooms	4 Intervention Schools	4 Reception Classrooms 4 Year One Classrooms 3 Year Two Classrooms
Total	*14*	*40 Classroom Observations*	*10*	*29 Classroom Observations*
TOTAL	**39**	**101 CLASSROOM OBSERVATIONS**	**29**	**52 CLASSROOM OBSERVATIONS**

Appendix 6

Number of Classrooms and Percentage where Items of Language Learning Environment where Observed across Year Groups

Items	Reception (N = 38)	Year 1 (N = 35)	Year 2 (N = 28)
Open Space	35	32	27
	92.1%	91.4%	96.4%
Learning areas are clearly defined	31	24	15
	81.6%	68.6%	53.6%
Learning areas are clearly labelled	28	20	14
	73.7%	57.1%	50%
There is space for privacy	20	17	10
	52.6%	48.6%	35.7%
Children's work is being displayed	34	31	20
	89.5%	88.6%	71.4%
Classroom displays invite comments from children	16	15	23
	42.1%	42.9%	46.4%
Book specific areas are available	32	30	22
	84.2%	85.7%	78.6%
Literacy specific areas are available	31	23	22
	81.6%	65.7%	78.6%
Background noise levels are managed consistently	27	27	20
	71.1%	77.1%	71.4%
Transition times are managed effectively	24	27	22
	63.2%	77.1%	78.6%
There's good light	34	34	25
	89.5%	97.1%	89.3%
The majority of learning resources are labelled	30	30	16
	78.9%	85.7%	57.1%
Resources are easily reached by the children	33	31	22
	86.8%	88.6%	78.6%
An appropriate range of books is available	27	27	24
	71.1%	77.1%	85.7%
Non-fiction books are also available	27	27	18
	71.1%	77.1%	64.3%
Outdoor play includes imaginative play	13	9	2
	34.2%	25.7%	7.1%
Good quality toys are available	35	24	14
	92.1%	68.6%	50%
Musical instruments are available	24	11	11
	63.2%	31.4%	39.3%
Role play is available	31	19	10
	81.6%	54.3%	35.7%
Language Learning Environment Total Score (max 19)	14.00	13.29	11.68
SD	(3.61)	(3.06)	(2.84)
Range			

Mean (SD) and Range of Items on Language Learning Opportunities across Year Groups

Items	Reception (N = 38)	Year 1 (N = 35)	Year 2 (N = 28)
Small group work facilitated by adults	2.08	1.86	1.54
SD	(1.76)	(1.78)	(1.79)
Range	5	5	5
Interactive book reading	.66	.71	.36
SD	(1.19)	(1.22)	(.55)
Range	5	5	2
Structured conversations with adults	1.74	1.29	1.14
SD	(1.85)	(1.36)	(1.35)
Range	5	5	5
Structured conversations with peers	.76	1.29	1.50
SD	(1.38)	(1.56)	(1.64)
Range	5	5	5
Attempts are made to include all children in group work	1.39	1.37	1.11
SD	(1.83)	(1.61)	(1.81)
Range	5	5	5
Language Learning Opportunities Total Score (max 25)	6.63	6.51	5.64
SD	(5.14)	(6.05)	(5.16)
Range	20	20	18

Mean (SD) and Range of Items on Language Learning Interactions across Year Groups

Items	Reception (N = 38)	Year 1 (N = 35)	Year 2 (N = 28)
Using children's names	3.84	4.37	4.21
SD	(1.58)	(1.14)	(1.25)
Range	4	4	4
Getting down to child's level	2.87	2.40	2.36
SD	(1.94)	(1.86)	(2.02)
Range	5	5	5
Using natural gestures	3.39	2.97	3.29
SD	(1.89)	(1.96)	(1.90)
Range	5	5	5
Using symbols, pictures and props	2.05	2.00	1.93
SD	(1.72)	(1.86)	(1.72)
Range	5	5	5
Pacing	2.89	2.77	2.71
SD	(1.91)	(1.94)	(1.97)
Range	5	5	5
Pausing	2.61	2.83	2.57
SD	(1.99)	(1.902)	(1.87)
Range	5	5	5
Confirming	3.45	3.20	3.14
SD	(1.94)	(1.79)	(1.95)
Range	5	5	5
Imitating	3.34	2.94	2.86
SD	(1.83)	(1.58)	(1.95)
Range	5	5	5
Commenting	3.13	2.57	2.32
SD	(1.72)	(1.72)	(1.33)
Range	5	5	5
Extending	1.50	1.80	1.93
SD	(1.78)	(1.45)	(1.98)
Range	5	5	5
Labelling	2.26	2.09	2.71
SD	(1.76)	(1.68)	(1.86)
Range	5	5	5
Encouraging children to use new words	1.13	1.43	1.54
SD	(1.27)	(1.70)	(1.42)
Range	4	5	5
Open questioning	2.87	2.91	3.32
SD	(1.84)	(1.96)	(1.94)
Range	5	5	5
Scripting	.58	.77	1.21
SD	(.85)	(1.14)	(1.47)
Range	3	5	5
Providing clear language choices	.74	.63	.43
SD	(.95)	(1.19)	(.83)
Range	4	5	3
Using contrasts	1.11	1.00	1.71
SD	(1.48)	(1.05)	(1.80)
Range	5	4	5
Modelling language that the children are not producing	1.29	1.71	1.68
SD	(1.48)	(1.60)	(1.67)
Range	5	5	5
Encouraging turn-taking	.82	.97	.86
SD	(1.01)	(1.07)	(1.26)
Range	4	5	5
Praising listening skills	1.03	1.63	1.00
SD	(1.51)	(1.89)	(1.01)
Range	5	5	4
Praising non-verbal communication	.79	1.00	.71
SD	(1.58)	(1.57)	(1.24)
Range	5	5	5
Language Learning Interactions Total Score (max 100)	41.68	42.34	42.50
SD	(21.27)	(19.87)	(18.82)
Range	74	74	66

Ref: DFE-RR247 – BCRP8

ISBN: 978-1-78105-157-3

November 2012