



# Exploring interventions for children and young people with speech, language and communication needs: A study of practice

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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Government policy and may make reference to the Department for Children, Schools and Families (DCSF) which has now been replaced by the Department for Education (DfE).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

<b>EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>1. INTRODUCTION .....</b>	<b>8</b>
<b>2. WHAT WE DID .....</b>	<b>11</b>
2.1 Participants .....	11
2.2 Procedure .....	12
<b>3. WHAT WE FOUND I: THE INTERVIEWS .....</b>	<b>15</b>
3.1 Description and categorisation of SLCN.....	15
3.2 Types of interventions identified.....	16
3.3 Participants' rationales .....	20
3.4 Outcome evaluation .....	21
3.5 Documentation.....	23
3.6 Conclusions .....	24
<b>4. WHAT WE FOUND II: THE SURVEY .....</b>	<b>25</b>
4.1 Most common patterns of work .....	25
4.2 Prevalence of interventions.....	29
4.2.1 Overall prevalence .....	29
4.3 Interventions and outcomes by age group .....	34
4.3.1 Under two years.....	34
4.3.2 Age 2-3 years.....	36
4.3.3 Age 4-5 years.....	38
4.3.4 Age 5-7 (key stage 1).....	41
4.3.5 Age 7-11 years (Key stage 2).....	44
4.3.6 Age over 11 years (key stage 3-4 and post-16).....	46
4.4 Outcomes .....	48
4.4.1 Outcomes targeted by type of special educational need.....	48
4.4.2 Outcome measurement and reporting .....	49

<b>5. DISCUSSION .....</b>	<b>51</b>
5.1 What is the range of interventions being used in current practice?.....	52
5.2 What interventions are used with children and young people from differing age groups, settings and with differing special educational needs? .....	54
5.3 What rationales and explanations do practitioners provide for the selection of different interventions? .....	55
5.4 What outcomes are targeted with these different interventions? .....	55
<b>6. CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>57</b>
6.1 Recommendations for practice.....	57
6.2 Recommendations for research .....	58
6.3 Recommendations for policy .....	58
<b>APPENDIX 1 BCRP REPORTS .....</b>	<b>61</b>
<b>APPENDIX 2 SUMMARY OF PARTICIPANT SITES FOR INTERVIEWS .....</b>	<b>65</b>
<b>APPENDIX 3 SUMMARY OF PARTICIPANT SITES FOR INTERVIEWS .....</b>	<b>66</b>
<b>APPENDIX 4 MOST TYPICAL SETTING IN WHICH SLTS WORK, BY AGE GROUP.....</b>	<b>71</b>
<b>APPENDIX 5 A FULL LIST OF ALL INTERVENTION PROGRAMMES MENTIONED IN THE INTERVIEWS AND SURVEY. ....</b>	<b>72</b>
<b>APPENDIX 6 INTERVENTIONS BY AGE .....</b>	<b>74</b>
<b>APPENDIX 7 OUTCOMES BY AGE.....</b>	<b>77</b>
<b>APPENDIX 8 OUTCOMES BY SEN CATEGORY .....</b>	<b>79</b>
<b>APPENDIX 9 TEMPLATE FOR THE DESCRIPTION OF INTERVENTIONS.....</b>	<b>81</b>
<b>APPENDIX 10. EXAMPLES OF OUTCOMES.....</b>	<b>83</b>

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## EXECUTIVE SUMMARY

The Better Communication Research Programme (BCRP) was commissioned as part of the Better Communication Action Plan<sup>1</sup>, the government's response to the Bercow review of services for children and young people with speech, language and communication needs<sup>2</sup>. 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<sup>3</sup>).

In order to understand the evidence base of interventions for children and young people with speech, language and communication difficulties, we first have to know what interventions are being used in practice. There are systematic reviews of the research literature which analyse and synthesise the results of studies of the effectiveness of interventions but to date, there has been no review of the interventions currently in use from which to investigate how far current practice is underpinned by research evidence. This project was designed to do that for key interventions that are identified in this project<sup>4</sup>.

Research questions for the project were:

- What is the range of interventions being used in current practice?
- What interventions are used with children and young people from differing age groups, settings and with differing special educational needs?
- What rationales and explanations do practitioners provide for the selection of different interventions?
- What outcomes are targeted with these different interventions?

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<sup>1</sup> [https://www.education.gov.uk/publications/eOrderingDownload/Better\\_Communication.pdf](https://www.education.gov.uk/publications/eOrderingDownload/Better_Communication.pdf)

<sup>2</sup> 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>

<sup>3</sup> Reports are accessible through the DfE's research site

<http://www.education.gov.uk/researchandstatistics/research>

<sup>4</sup> 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.

## Key findings

- Over 158 interventions were identified during interviews and a survey of practice.
- There was no consistent way of describing interventions - the descriptions we encountered included programmes, activities, principles and approaches, resources, programmes for training professionals, models of theories of intervention, targets, and finally as service-developed programmes.
- The most common interventions varied depending on the age of the child.
- Speech and language therapists (SLTs) targeted communication, language, speech, fluency, and social/learning outcomes.
- Outcomes such as independence and inclusion, which were outcomes valued by parents, were also targeted by SLTs but were not necessarily primary targets.
- Outcomes data were collected at the level of the individual child although only one third of participating SLTs submitted outcome data to their service manager.

## Detailed findings

- Educational psychologists, education advisory staff and SLTs took part in the interviews and over 500 SLTs took part in the survey.
  - Most of the SLTs taking part in the survey worked in mainstream schools and community clinics and their most typical children had primary speech and language difficulties followed by children with autism spectrum disorder.
- The most common intervention programmes varied depending on the age of the child.
  - The Derbyshire Language Scheme and Makaton were the most common for children up to the age of 7 years.
  - For children over the age of 7 years a range of programmes focusing on social language skills were the most common.
  - For children between 4 and 7 years, the Derbyshire Language Scheme and the Nuffield Dyspraxia Programme were the most common.
- SLTs targeted communication, language, speech, fluency and social/learning outcomes; specific interventions varied according to children's ages.
  - For children up to the age of 3 years, general communication skills and parent-child interaction were the most commonly targeted outcomes.
  - For children aged 4-11, there was an even spread across the range of skills, although intelligibility was the most common outcome targeted for children

aged 4-5, whereas language expression and understanding were more common for ages 5-11.

- For children aged 5 and above the emphasis shifts from a focus on parents' skills to teacher skills.
- For children and young people over the age of 11 years the focus was on social and communicative outcomes; this included intelligibility although there was less emphasis on the accuracy of speech production with this age group.

### **Recommendations for practice**

Interventions should be described using a consistent framework so that the outcomes, techniques and theoretical underpinnings are transparent. Details of delivery mechanisms and resources used can be added for further clarification. Appendix 8 provides examples of how this framework might be structured.

The development of further interventions at a service level should proceed carefully and follow a review of existing interventions. Any new interventions developed by services should make explicit how they differ from existing interventions.

### **Recommendations for research**

There are a number of well-used interventions that have little evidence to support their implementation in practice. Targeting a number of these popular interventions would help to increase our understanding of the impact of intervention on children and young people with SLCN.

In order to compare existing programmes it will be necessary to deconstruct and analyse the similarities and differences between existing programmes.

### **Recommendations for policy**

The most pressing need at service and national level is for a stronger focus on outcomes for children and young people, including the outcomes valued by parents and children. They should reflect the primary SLCN and learning needs of the child, so that for children with primarily speech difficulties, services should be collecting speech relevant outcomes as well as those relating to parents' interests in independence and inclusion. Appendix 9 provides examples of how these might work for different groups of children.

## 1. INTRODUCTION

The Better Communication Research Programme (BCRP) was commissioned as part of the Better Communication Action Plan<sup>5</sup>, the government's response to the Bercow review of services for children and young people with speech, language and communication needs<sup>6</sup>. 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<sup>7</sup>).

The present study builds on earlier research that has explored the practice of SLTs and educational specialists (educational psychologists and special educational needs (SEN) advisory and supporting staff). These studies examined practice but did not focus on interventions per se. For example, Dockrell et al. (2006) explored with speech, language therapy (SLT) and local authority (LA) SEN managers the provision made for children and young people with SLCN, focusing on systemic issues. Other studies have mapped out the type and quantity of specialist provision and the practices of LAs and health trusts with respect to policy and professionals' practice, (Lindsay et al., 2003; Lindsay et al., 2005a). These studies identified limitations. Specialist educational provision, primarily designated specialist resources within mainstream schools,<sup>8</sup> varied in prevalence across the country. As part of the research that supported and advised the Bercow Review, we found that LAs and primary care trusts (PCTs) also differed in the degree and nature of joint working. For example, the percentage of children and young people designated as having either SLCN or

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<sup>5</sup> [https://www.education.gov.uk/publications/eOrderingDownload/Better\\_Communication.pdf](https://www.education.gov.uk/publications/eOrderingDownload/Better_Communication.pdf)

<sup>6</sup> 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>

<sup>7</sup> Reports are accessible through the DfE's research site  
<http://www.education.gov.uk/researchandstatistics/research>

<sup>8</sup> In the past these have typically been labelled 'language units' / With the development of inclusive education and the changes in focus, e.g. to include children and young people with autism spectrum disorder (ASD), LAs adopted a number of different descriptions, e.g. integrated resource, integrated specialist provision.

ASD as their primary special educational need varied substantially<sup>9</sup> (see also Lindsay et al., (2010).

Previous research, therefore, has examined broader aspects of service delivery. The present project had a focus at the level of specific interventions rather than provision, policy development or general service delivery. The overall aim was to explore current practice regarding interventions for children and young people with SLCN.

Interventions may be defined in a number of ways ranging from *general* sets of actions, techniques, activities or procedures (or a combination of these) to *specific programmes*. Law et al. (1998) define intervention as 'an explicit application of therapeutic/educational techniques intended to modify an individual's performance in a designated area associated with communication'. The terms used also include therapy, treatment, intervention, and remediation. Some (e.g. therapy) are more medically orientated and terminology changes over time; e.g. 'remediation' is arguably less common, especially in education, than in the past. This variation in terminology and substance provides a rather confusing backdrop (Roulstone et al., in press).

This project, therefore, set out to explore the range of interventions currently in use with children with speech, language and communication needs (SLCN) in England. The study comprised two phases. First, interviews were held with a sample of managers of speech and language therapy services and of educational psychology services (Phase 1: Spring and Summer Terms 2010). In practice the interviews sometimes also included senior educationists, at the invitation of the principal educational psychologist who had responsibility within the LA for provision of SLCN. This phase identified that it was speech and language therapists (SLTs) that were primarily engaged in the delivery of these interventions, either directly or acting as consultants to others.

Phase 2 comprised a national survey of SLTs in England to explore the prevalence of use of these interventions and the perspectives of SLTs. The survey was conducted in December 2010 and was circulated via the Royal College of Speech and Language Therapists (RCSLT) to their members.

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<sup>9</sup> 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: DCSF.  
<http://www.dcsf.gov.uk/research/data/uploadfiles/DCSF-RW053.pdf>

This study was designed to complement a separate project within the Better Communication Research Programme (BCRP) that focused on the research evidence for the effectiveness of interventions of children with SLCN<sup>10</sup>. Together the projects allow us to consider the match between practice and the available research base.

The particular questions addressed by this project were:

- What is the range of interventions being used in current practice?
- What interventions are used with children and young people from differing age groups, settings and with differing special educational needs?
- What rationales and explanations do practitioners provide for the selection of different interventions?
- What outcomes are targeted with these different interventions?

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<sup>10</sup> 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.

## 2. WHAT WE DID

In summary, Phase 1 comprised interviews with a sample of key professionals from LAs and PCTs in England; Phase 2 comprised a national survey of SLTs<sup>11</sup>.

### 2.1 Participants

#### *Interviews*

The interview sample was drawn from 14 different areas: six rural counties, seven urban and one inner London Local Authorities (LAs). Interviews were held with senior managers from 10 Educational Psychology Services (EPS) and 14 NHS Speech and Language Therapy Services; ten of the Speech and Language Therapy Services were in the same locality as the EP services. The EPS interviews often included one or more advisory teachers for SLCN from the same Local Authority. In one SLT interview, an advisory teacher for the LA joined her NHS colleague. One additional interview was carried out with the Integrated Disability Service provided by the LA. Table A.1 summarises the interviews that took place (See Appendix 1).

In total, 46 practitioners were interviewed Table 1.1 shows the numbers for each category of practitioner.

**Table 2.1 Practitioners interviewed**

<b>Practitioners interviewed</b>	<b>Numbers</b>
Educational psychologists	12
Speech and language therapists	25
Advisory teachers for SLCN	3
Advisory support team manager	2
Head of sensory service	1
Learning support manager	1
Communication and interaction team manager	1
Integrated disability service manager	1

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<sup>11</sup> A further survey was also conducted with the aid of NAPLIC (National Association of Professionals working with Language Impaired Children) in order to access educationists' views. Unfortunately the response rate was too low to provide results that could be generalised with confidence.

## 2.2 Procedure

### *Interviews*

Two broad phases of interviewing took place: the first collected data around the range and nature of interventions in use and the second sought to confirm emergent data, to pilot questions that could be used in a subsequent national survey tool and to provide information to populate options in the survey. Interviews took from 45 minutes to 2 hours and were conducted in the interviewees' work-place in a quiet room.

The first phase interview was piloted with a range of LA and NHS SLT managers and team leaders in one LA. Following adjustments to the format the interview with the main sample began by asking respondents how they defined groups of children with SLCN and the terms 'Universal', 'Targeted' and 'Specialist when considering interventions'<sup>12</sup>. They were then asked to list the interventions they use with children with SLCN, dependent on whether the intervention was targeting communication, language or speech skills. They were then asked to describe one intervention from each list in detail and explain whether and how the intervention is being evaluated at a service level.

The interview comprised a semi-structured format whereby broad open questions were followed by probes for additional detail and clarification. This allowed both coverage of major topics with all interviewees and flexibility for individuals to expand on their particular circumstances. This was especially important as it was anticipated that professionals from differing disciplines would identify and define interventions differently. We did not want our questions to contain preconceptions about what would be offered as examples of interventions.

Interviewees were also asked to supply any policy documents relating to intervention and provision/prioritisation that might be relevant.

The second phase of data collection used the list of interventions acquired during phase 1 as a starting point. Participants were asked to indicate which of the interventions they offered in their service. They were also asked if they evaluated the effectiveness of the intervention at a service level and whether the intervention was used at a universal, targeted or specialist level.

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<sup>12</sup> In education, equivalent terms are Waves 1, 2 and 3 respectively; Tiers 1, 2 and 3 are terms also in use.

Interviews were recorded with the interviewees' permission but were not fully transcribed. Field notes were kept and the recordings were used to confirm data.

### *Survey*

The content of the survey was determined on the basis of the interviews in Phase 1. An online survey was made available through the BCRP website at CEDAR, University of Warwick. Distribution of information about the survey and request to contribute was facilitated by the Royal College of Speech and Language Therapists. Members were emailed with an invitation to access the survey directly via a URL link embedded in the email. In order to cover the breadth of resources and programmes in use, the survey content was complex. In order to aid participants in completing the survey, questions were routed, which means that participants were presented only with questions relevant to them, based on answers to previous questions.

The survey generated 576 responses, 27 of which were filtered out immediately because respondents did not work with children or the children's workforce, nor did their role involve training others who work with children. A further 13 were excluded from the core questions, instead they were directed to a separate section of the survey containing questions specifically designed for those involved in training others who work with children.

Respondents were asked to identify the most typical child on their caseload in terms of age range, SEN category and setting. They were then presented with a list of interventions and asked which of these they used with the most typical child on their caseload and whether they used them rarely, sometimes or frequently. Interventions were explored in three main categories: published programmes, intervention activities, and principles/approaches. We were able to cross reference findings by age and primary need of the child with whom these interventions are used. Other data included delivery (frequency and timescale), the outcome data gathered and whether these were reported within their service, allowing overall monitoring of outcomes and effectiveness. Hence the data relate to each SLT's *most frequent practice*.

### *Analysis*

Analysis of the interviews sought primarily to characterise the types of interventions being used, therapists' rationales and targeted outcomes according to emergent categories. Data from the questionnaires were analysed descriptively using SPSS v18. Data regarding

published programmes, intervention activities and principles/approaches were interrogated according to age group, SEN type and setting in which practitioners worked.

### 3. WHAT WE FOUND I: THE INTERVIEWS

#### 3.1 Description and categorisation of SLCN

The first phase interviews showed differences in how SLT and EP services categorise SLCN. Generally, participants from education backgrounds described SLCN as intrinsic to many types of special need and did not suggest categorisations of types of SLCN.

“It’s hard to think of children we are working with (who have) no need of some kind of communication need.” (educational psychologist)

Another stated:

‘I’m not sure we do group them do we really’ (Deputy Principal EP)

Descriptions of SLCN were clearly influenced by the SEN Code of Practice<sup>13</sup> and to some extent seemed to reflect the categories used in the School Census<sup>14</sup>. For example, some services highlighted children with autism spectrum disorder as a specific group or those with behavioural, emotional and social difficulties (BESD).

Education practitioners tended to focus on children’s needs rather than diagnostic categories.

“..we ask what are the concerns and what are the barriers to access and then what are the interventions....We are driven by Code of Practice definition of SLCN; so would not label a child but look at indications of need” (advisory support team manager)

In contrast, SLTs tended to categorise children with SLCN into a diagnostic category or type of impairment (e.g. specific language impairment, cleft palate, voice problem, dyspraxia). One exception to this was an SLT service that categorised their children with SLCN into therapeutic need following the Care Aims model (Malcomess, 2005).

Responses to the questions about ‘Universal, Targeted and Specialist’ interventions brought broadly similar answers from respondents, in that there was an acknowledgement of a hierarchy of need and provision; however, education practitioners tended to use the notion of

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<sup>13</sup> Department for Education and Skills (2001) *Special educational needs, Code of practice*. London: HM Stationery Office

<sup>14</sup> The School Census is used by the Department for Education to collect information of all pupils in state funded schools every term, including whether a pupil has SEN, the level of needs and for the 2 higher levels of need the primary type of need.

Wave one, two and three or Tier one, two and three to express this idea. Box 1 shows one SLT practitioner's differentiation which was typical of most.

### **Box 1. Universal, targeted and specialist – the view of one practitioner**

Universal:	open and available to all;
Targeted:	pupils who have additional needs who need additional intervention that would map onto school action <sup>a</sup> ; targeted provision might involve across- school provision;
Specialist:	pupils with highest level of need requiring external involvement at a specific level rather than just advisory or modelling; it would involve pupil assessment, diagnosis and then delivering.

Note: <sup>a</sup> Action taken by the school in response to a child's needs that is additional or different from those usually **provided** within a differentiated curriculum

### **3.2 Types of interventions identified**

Participants described interventions in a variety of ways, irrespective of whether they were talking about interventions for communication, language or speech. Interventions mentioned by the education participants tended to be different from those mentioned by SLTs although there was overlap. Local authority interviewees generally deferred to their SLT colleagues when offering interventions about speech. A total of **158 different interventions** were mentioned and from these eight broad groupings of interventions emerged which are defined below<sup>15</sup>. Examples of each group appear in Table 3.1.

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<sup>15</sup> The full list of interventions mentioned in the interviews is available in Appendix 3.

**Table 3.1 Examples of interventions identified by participants**

Category of intervention	Examples
Programmes	Programme of Phonological Awareness Training, Social Stories, Colourful Semantics, Living Language
Intervention activities	Auditory memory activities, barrier games, narrative therapy
Principles or approaches to intervention	Chunking, extending, forced alternatives, reducing distractions
Service developed programmes	Talk to your Bump, package for secondary schools, Two-time group
Resources	Becky Shanks narrative packs, Black Sheep Press materials, Language Master
Training	Elklan, Early Bird,
Models or theories of intervention	Personal Construct theory, Stackhouse and Wells Psycholinguistic framework
Targets of intervention	Improving phonological skills, reducing anxiety about speaking, listening skills

### *Programmes*

Interviewees described interventions that consisted of a package of activities, arranged in some kind of hierarchical structure. Often these had been published as a named package; sometimes they were reported within a peer reviewed paper. However, it was also clear that named packages are not always used according to the original manual or the intentions of the original author. Adaptations were being made to suit local purposes.

“When you implement a programme, you can never just take it off the shelf and say ‘that’s absolutely right’, you’re always looking at it, taking feedback from the schools, then developing things that bolster what they see as the gaps.”

(Advisory service manager)

### *Intervention Activities*

Interviewees referred to a discrete activity targeting a specific skill or deficit, for example, auditory discrimination and the use of barrier games. Within the interviews there was not always time to probe for detailed explanations of terms that were used. We cannot therefore assume that a descriptive label of an intervention used by several participants is necessarily describing identical interventions.

“We use narrative therapy through books and generally literature – like Social Stories but it is a bit different. It's about using books that tap into the child's own story, it's about using books that the child in question can identify with. And by reading the book, you ask them to identify and predict what might happen next and what else can they do in a similar situation. You ask the child to identify with the characters in the story and think of alternative solutions to a situation.”

(Senior Educational Psychologist)

### *Principles or Approaches to Intervention*

In some cases, participants seemed to be referring to principles of interventions. These might be approaches that would be included or form the basis of activities that were included in programmes (see above). They might also refer to actions or styles that could be adopted by adults in the child's environment when interacting with children with SLCN within everyday activities.

“Through the Communication Friendly Environments training package we offer to schools, we provide training to school staff on how the role of the speaker and the things they need to be aware of, such as techniques they need to use, you know, simplifying their language, breaking it down, extending what the child says and adding information. This is a key aspect of a language-friendly classroom”

(Speech and Language Therapy Team Leader)

### *Service Developed Programmes*

Frequently our interviewees described programmes which had been developed by the team locally. These sometimes adapted components of published programmes or combined intervention activities in a novel way or delivered an intervention in a mode particularly suited to local needs. A typical example would be locally developed language groups:

“(language groups) have been running for quite a few years in (location). We have a set format and a pack that goes with it. We devised aims and activities for all the different areas of language including areas like concepts, vocabulary, following instructions, memory, narrative. We aim to target both receptive and expressive language and tend to plan a group that targets both skills so part of the group will work on understanding and part of the group will work on expression....” (SLT service)

Others described the development of intervention resources, for example:

“We developed a resource called SELECT (Social and Emotional Language Enrichment Curriculum Time). The programme folders are distributed to all the schools and this is basic a weekly intervention taking place within a group (no more than 6 children) delivered by a TA”. (Acting Principal Educational Psychologist and Teacher in Charge of the Speech and Language Enhanced Resource Provision for primary children)

Other service developed programmes mentioned in the interviews included phonological awareness programmes, packages for use with children transitioning to secondary schools and a package to develop non-verbal and verbal social and communication skills in children across the ability range.

### *Resources*

The names of resources were also used as a way of naming an intervention. These resource names seemed to be used as shorthand and sometimes referred to an area of language that was being targeted (such as narrative) or to an approach (such as the use of visual approaches). For example, participants regularly referred to ‘*Black Sheep Press*’, a specialist publisher, as a means of referring to their interventions.

“We widely use the Narrative Therapy Packs (Nursery Narrative Pack, Reception Narrative Pack and KS1 Narrative, Speaking and Listening through Narrative) – Black Sheep Press”.  
(Highly Specialist Speech and Language Therapist – Support in Mainstream Schools Team)

Many examples of resources were reported in the interviews. These included commercial resources such as ‘Talkabout’, ‘Semantic Links’ and ‘Jolly Phonics’, assessment/analysis materials such as ‘LARSP’ and the ‘LAMP’ screen, and more general resources such as communication passports and mind maps.

### *Training*

A number of training packages were mentioned. These were targeted either at parents or other practitioners, as a way of giving them skills to be effective deliverers of interventions. Examples of these included nationally recognised activities such as Elklan training, the Inclusion Development Programme and Makaton training and locally developed packages for training parents and/or teachers.

“We train all the schools on how to use the Communication Friendly Environment programme and how to monitor their environment” (Speech and Language Therapy Team Leader)

### *Models or Theories of Intervention*

Participants did occasionally refer to theories underpinning interventions rather than describing the activities or approaches. Examples that were mentioned included the personal construct theory, metalinguistic theory and Dodd's classification of speech impairment.

'I tend to use that Stackhouse and Wells model of hierarchy of speech input and output processing, so we'll do non-word versus real word' (Speech and Language Therapist)

### *Targets of Intervention*

Finally, participants talked about the targets for interventions; these included aspects of the child's speech, language and communication, underpinning cognitive and processing skills or the broader psychosocial aspects of interaction. For example, participants might focus on 'listening skills' rather than the interventions used to change children's listening skills. Other targets that were identified included sentence processing, sequential memory and phonological awareness.

It was rare that interventions were linked exclusively to any particular level of intervention (i.e. universal, targeted, specialist) or to any particular age or diagnostic group of children, although some interventions were used in a more targeted fashion. For example, the Picture Exchange System (PECS) was reported mostly in the context of children on the autism spectrum and with those with more severe and profound learning difficulties.

## **3.3 Participants' rationales**

The rationale given for the choice of a particular intervention included explanations that were based on pragmatic decisions as well as indications that practitioners had considered the evidence base behind an intervention. In addition, some practitioners gave more than one rationale. For example one commented that running a series of specially designed language groups made 'best use of available resources' (SLT manager). This same practitioner also explained that another intervention was chosen because research associated with the programme supported its effectiveness. Thus, some practitioners employed different rationales for why an intervention is considered useful. Box 2 provides other examples of rationales provided by interviewees.

## Box 2 Examples of rationales provided by participants.

- so that a service could support more children (pragmatic)
- to skill up school staff, raise awareness about the identification of needs and to give responsibility back to the school (related to a desired outcome)
- language skills are better practised within a group (evidence-related)
- to reduce referrals back to SLT (pragmatic)
- children learn best in naturalistic environments (evidence-related)
- parents like the homework (pragmatic)
- because it's fun (pragmatic)
- because it's visual (evidence-related)

### 3.4 Outcome evaluation

Interviewees talked about improving or increasing the children's skills and performance in communication, language and speech as one would expect; they also mentioned the broader aspects of children's social and interaction skills and aspects of psychosocial functioning, such as self-esteem and behaviour. Interviewees also reported that they were looking to impact on the child's environment through change in the interactions of significant adults. Box 3 shows the outcomes mentioned in relation to interventions to improve language, identified by our interviewees. For each outcome we present the programmes, activities and/or approaches used by our interviewees.<sup>16</sup>

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<sup>16</sup> See Appendix 3 for the full analysis of each domain of outputs.

**Table 3.2 Outcomes for language**

<b>Outcomes</b>	<b>Programmes and packages</b>	<b>Activities</b>	<b>Principles and approaches</b>
<i>Understanding of language</i>	BLAST, Derbyshire Language Scheme, Visualize and Verbalize	visual approaches to support language, symbols, chunking, repetition, forced alternatives, reduced distractions, use of key words, providing feedback	
<i>Expressive language structure</i>	Becky Shanks Narrative Pack, Colourful Semantics, Socially Speaking, Talking Partners, Hanen, Derbyshire Language Scheme	language rich environment, modelling, extending, repetition, reducing questions, use of key words, commenting	
<i>Range of sentence elements</i>	Colourful Semantics		
<i>Narrative skills</i>	Becky Shanks Narrative Pack		
<i>Vocabulary</i>			narrative therapy, extending, repetition, forced alternatives, use of key words
<i>Fluency of language production</i>			narratives
<i>Specificity of language</i>			barrier games
<i>Concept knowledge</i>		use of symbols	auditory memory activities
<i>Wordfinding</i>		Chunking	
<i>Recall of information</i>		use of symbols	

In terms of the methods used in the evaluation of outcomes, interviewees generally reported that outcomes were measured for the individual child. Systematic evaluation of an intervention across a service or an authority was rare although some groups reported that a particular intervention had been evaluated in a one-off project within their area. Some interventions are associated with evaluation protocols which interviewees reported that they used routinely, for example a questionnaire associated with the Hanen programme.

Feedback from parents and teachers regularly played a part in the evaluation of outcomes through completion of locally developed questionnaires, although only one group reported that a user group was consulted for feedback. However, the predominant focus of evaluation was on the individual child rather than on any cross-service evaluation.

### **3.5 Documentation**

A wide variety of types of documentation was submitted indicating a range of practice. Some gave specific guidance on which intervention should be used for specific groups of clients. For example, one SLT service care pathway showed that a child with speech difficulties aged above three years, six months and with good attention would receive a diagnostic screen programme while the same type of child, but with poor attention, would receive a sound awareness group programme. Some services provided this level of detail for some client groups and interventions (e.g. Lidcombe programme for children who are dysfluent) but not others, while other services provided practitioners with a range of interventions from which to select using their professional judgement. Other services listed interventions related to the area targeted, for example, one EPS listed a range of interventions for children where the target of intervention was improved attention and listening.

Other services reported examples related to universal, targeted or specialist types of intervention, though these tended to list broad based programmes rather than specific intervention activities or approaches. Some services provided information on the amount of intervention, but not the type, that would be provided for different groups of children. Others stated when intervention would be offered but not what type. Some services did not provide documentation or only provided documentation on provision, prioritisation and care pathways but with no reference to type of intervention.

### **3.6 Conclusions**

The interviews stage indicated a wide range of practice. The intention of this phase was to produce as comprehensive a picture as possible of the use of interventions for children and young people with SLCN rather than to explore relative prevalence: these data shaped the national survey that is reported in the next section, which did seek to explore prevalence of practice.

It is of interest that these interviewees identified that SLTs were the main practitioners implementing interventions; our EPS managers were clear that EPs were rarely involved with direct interventions. Consequently our second phase, the national survey, was aimed at SLTs.

## 4. WHAT WE FOUND II: THE SURVEY

In this section we report the findings from the national survey of SLTs. For most items the total number of responses was 536. Some respondents did not complete all sections, in which cases we report the number responding to that section.

We first describe the patterns of work for these SLTs, focussing on the most frequent or common practice. We then examine their use of interventions.

### 4.1 Most common patterns of work

The most common age range of children with whom the SLTs most frequently worked was 5-7 year old children (28% SLTs). A total of 75% of SLTs reported their most common age ranges were within the broader 2-7 years range (Table 4.1).

**Table 4.1 Age of child with whom the SLT most frequently worked (% SLTs)**

<b>Age group</b>	<b>%</b>
Under 2 yrs	3.2
2-3 yrs	21.3
4-5 yrs	24.8
5-7 yrs (Key stage 1)	28.4
7-11 yrs (Key stage 2)	14.0
11-14 yrs (Key stage 3)	7.1
15+ yrs (Key stage 5)	1.3

*N* = 536

Primary SLCN with *language* as the primary difficulty was the most common area reported (36%). Primary SLCN with *speech* as the primary area was reported by 19% and Autism Spectrum Disorder (ASD) by 11.4% (Table 4.2).

**Table 4.2 Primary need with which the SLT most frequently worked (% SLTs)**

<b>SEN category</b>	<b>%</b>
Primary Speech Language and Communication needs with <i>language</i> as the primary difficulty	36.0
Primary Speech Language and Communication needs with <i>speech</i> as the primary difficulty	19.4
Autism Spectrum Disorder	11.4
Severe Learning Difficulties	7.3
Specific Learning Difficulties (e.g. dyslexia, dyspraxia)	5.8
Primary Speech Language and Communication needs with communication /interaction as the primary difficulty	5.6
Moderate Learning Difficulties	5.0
Profound and Multiple Learning Difficulties	3.2
Hearing Impairment	2.4
Physical Difficulties	1.7
Behavioural, Emotional and Social Difficulties	1.5
Multi-Sensory Impairment	0.7

*N* = 536

Mainstream schools were reported most frequently as the main location of work (36%) followed by community clinics (17%) and special schools (12%) (Table 4.3).

**Table 4.3 The setting in which the SLT most frequently worked**

<b>Setting</b>	<b>%</b>
Mainstream school	35.8
Community clinic	17.0
Special school	12.3
Language resource base, specialist language unit	7.7
Pre-school/nursery	6.5
Children's centre	6.0
Home and Leisure clubs	5.4
Child development centre	4.3
Specialist assessment centre	2.2
Setting other than listed	1.5
Independent practice	1.3

*N* = 536

When respondents chose 'Setting other than those listed', they were asked to specify the setting. This generated 54 comments, almost half of them (22) mentioned working at home (either the child's or practitioner's). Where possible the comments were re-coded into the categories listed, leaving only 8 (1.5%) unclassified.

Table 4.4 summarises the most typical age and SEN category for each of the settings identified. So for example, for 81% of the 32 SLTs working in children's centres, the age group of 2-3 years was the most common and for 66%, the most typical child had primary SLCN (language). As can be seen from the Table 4.4, the percentage of SLTs reporting a type or age of child as their most common varies, suggesting that, in some settings, there is more variety. So in community clinics and mainstream schools, children with primary speech and language SLCN are the most typical child seen by over 80% of responding SLTs whereas in the resource bases, children in this category of SEN were reported to be the most typical by only 42% of SLTs suggesting that there is a wider spread of SEN categories. Appendix 3 provides the full cross tabulation tables to show the age and SEN category of the most typical child according to the setting of all responding therapists.

**Table 4.4 The most typical child reported by SLTs in each setting**

<b>Setting</b>	<b>% of SLTs reporting this to be their most typical child</b>	
	<b>Most common age</b>	<b>Most common SE</b>
Children's Centres N = 32	2-3years 81%	Primary SLCN (Language) 66%
Preschool nursery N = 35	2-3 years 63%	ASD 29%
Community clinic N = 91	4-5years 52%	Primary SLCN (speech and language) 85%
Mainstream school N = 190	5-7 years 51%	Primary SLCN (language) 87%
Child development centre N = 23	2-3 years 52%	ASD 35%
Resource base N = 38	5-7years 45%	Primary SLCN (Language) 42%
Special school N = 66	5-7 years 32%	Severe learning difficulties 35%
Other N = 61	4-5 years 36%	Primary SLCN (speech) 21%

## **4.2 Prevalence of interventions**

For the next sections, we report the range and frequency with which respondents reported use of particular interventions with their 'most typical child' identified in the survey in terms of age, SEN category and setting. For example, if respondents had indicated that their most typical child was aged between 5 and 7, had a diagnosis of ASD and was seen in school, they were asked to indicate the frequency with which they used each of the listed interventions for this child only.

### **4.2.1 Overall prevalence**

#### *Programme*

A total of 38 programmes were listed in the survey. These include a mixture of those which comprise a published kit including a manual and others based on published papers in journals as well as programmes devised by their own service and used exclusively by them.

A full list of the programmes is provided in Appendix A4.

Table 4.5 presents the respondents' frequency of use of the specified programmes with their 'most typical child'.

**Table 4.5 SLTs' use of programmes (%)**

<i>Published programme used</i>	<i>Used rarely %</i>	<i>Used sometimes %</i>	<i>Used frequently %</i>
Derbyshire Language Scheme	9.3	27.4	37.9
Makaton	11.0	23.5	35.1
Hanen	12.7	18.8	20.9
Service developed programme	8.0	7.1	20.9
Nuffield	12.5	27.8	19.0
Other published programme	12.5	12.1	17.9
Core Vocabulary	9.5	23.5	17.0
Language for Thinking	13.1	15.7	15.7
PECS - Picture Exchange Communication System	16.4	23.7	15.1
Social Stories (Carole Grey)	14.4	23.9	14.7
Becky Shanks Narrative packs	13.6	16.8	14.6
Intensive Interaction	14.4	16.8	14.4
Colourful Semantics	13.2	23.7	12.9
Talkabout (Alex Kelly)	15.9	20.0	10.8
TEACCH - Treatment and Education of Autistic and related Communication Handicapped Children	16.2	13.1	9.3
Cued Speech	18.5	17.9	8.0
Signalong	14.6	7.1	7.6
Socially Speaking	14.6	20.1	7.6
Social Use of Language Programme	16.2	19.8	7.3
Living Language	20.3	16.6	6.0
Metaphon	18.8	14.2	5.8
Comic Strip Conversations (Carole Grey)	15.9	15.5	4.5
Lidcombe Program	18.5	7.5	4.1
Time to Talk	16.6	8.6	4.1
Visualise and Verbalise	18.7	6.3	3.9
Swindon Dysfluency pack	17.7	5.0	2.2
Teaching Talking	18.8	4.1	1.9
BLAST - Boosting Language Auditory Skills and Talking	17.9	1.3	1.7
Language Land	16.8	3.4	1.7
POPAT - Programme of Phonological Awareness Training	17.9	1.7	1.7
Talking Partners	16.4	4.7	1.3
Circle of Friends	17.7	12.3	1.1
Language Link	17.9	2.1	1.1
Bobath approach	18.5	4.3	0.7
Speech Link	18.1	1.5	0.6
Spirals	18.5	3.0	0.6
Susan Myers Bumpy speech	17.5	2.6	0.4
Talk to your Bump	18.3	1.3	0.4
ABA - Applied Behaviour Analysis	20.0	3.7	0.2
PEEP - Peers Early Education Partnership	17.2	1.9	0.2

*N* = 536

Table 4.5 shows the very large number of programmes used by SLTs (respondents were asked to indicate all that applied). The most commonly used programme was the Derbyshire Language Scheme: over one third of SLTs (37.9%) reported they used this programme frequently and two thirds (65.3%) used it sometimes and frequently.

Over a quarter of respondents (28%) reported using service developed programmes. In total, 126 different service developed programmes were identified by respondents. Those respondents who were working more frequently with children over the age of 11 years used locally developed interventions (43-45%) more frequently on average than those working with children in the preschool and primary age arrange (21-30%), but no particular patterns of locally developed programmes were identifiable across SEN categories or settings. In addition, a further 162 'Other published programmes' were also mentioned (see below for further information).

#### *Intervention activities*

Table 4.6 shows the intervention activities used by SLTs (respondents were asked to indicate all that applied). This list is heavily loaded towards 'speech' activities, supporting a difference that emerged from the interviews, namely that when they are considering language, SLTs were more likely to talk about programmes that they use; when considering speech, there are perhaps not so many programmes in common use in the UK, and therefore they tend to focus on the principles of activities

**Table 4.6 SLTs' use of intervention activities (%)**

<b><i>Intervention Activities</i></b>	<b><i>Use rarely</i></b> <b>%</b>	<b><i>Use sometimes</i></b> <b>%</b>	<b><i>Use frequently</i></b> <b>%</b>
Auditory discrimination activities	4.9	21.3	42.7
Phonological awareness tasks	5.0	25.6	41.4
Minimal pair discrimination or production	7.1	21.1	36.6
Barrier games	6.2	31.5	34.5
Auditory memory activities	6.9	30.8	31.2
Narrative therapy	8.4	31.5	27.1
Traditional articulation activities	8.8	22.6	25.4
Rhyme awareness activities	9.7	29.7	24.3
Other intervention activities	6.9	11.4	20.3
Cued articulation	16.4	20.7	13.1
Auditory bombardment/focused auditory stimulation	12.5	19.6	10.4

*N* = 536

The most common of the 11 activities used 'sometimes' and 'frequently' were phonological awareness tasks (67%), barrier games (66%) and auditory discrimination activities (64%). When asked to specify other intervention activities frequently used, **133** were mentioned.

The 'other programmes' and 'other activities' that were mentioned by survey respondents followed a similar pattern to that originally identified in the interview data. That is, respondents mentioned programmes, single intervention activities, principles or approaches, resources, training activities, targets, theoretical models and locally developed programmes. In each group there were additional interventions that had not previously been listed and some that had already been identified.

#### *Principles or approaches*

Table 4.7 presents comparable data for SLTs' use of specified principles or approaches.

**Table 4.7 SLTs' use of principles/approaches (%)**

<i>Principles or Approaches</i>	<i>Use rarely %</i>	<i>Use sometimes %</i>	<i>Use frequently %</i>
Modelling	0.4	8.0	86.8
Creating a language rich environment	1.7	10.1	71.8
Repetition	1.5	13.4	70.5
Visual approaches to support language	2.2	15.3	67.9
Providing feedback	1.7	12.5	67.0
Forced alternatives	2.8	18.1	66.0
Waiting for response	1.3	13.1	66.0
Commenting	1.9	15.5	65.3
Reducing distractions	1.7	20.1	62.1
Reducing questions	2.1	19.2	62.1
Differentiating the curriculum	3.2	13.4	58.2
Extending	1.9	14.6	57.8
Using key words	2.6	19.4	57.6
Visual timetables	4.5	26.7	53.0
Signing	9.1	28.4	44.4
Use of symbols	7.5	27.2	41.2
Chunking	6.3	17.4	41.0
Total communication	5.6	18.3	34.7
Increasing awareness of errors	7.5	25.9	32.3
Parent child interaction (PCI)	11.8	20.1	31.9
Using objects of references	14.7	25.0	25.7
Use of alternative and augmentative communication	12.5	25.6	25.4
Task management boards	11.2	21.6	16.8
Workstations	13.8	17.4	13.6
Other principle or strategy used in intervention	3.0	3.4	8.2
Use of British Sign Language	20.3	5.0	3.9

*N* = 536

Again, it is clear that a large number of these activities and principles are used by SLTs. Indeed, even that which is 24/26 on the list is used sometimes or frequently by almost a third of SLTs (31%). The most commonly used approaches were modelling (95%), forced alternatives (84%), repetition (84%), visual approaches to support language (83%), and reducing distractions (82%).

### **4.3 Interventions and outcomes by age group**

In this section we further explore SLT practice within each age group. We indicate the most typical SLCN and setting reported by respondents for that age group. We present the interventions used with each age group in terms of the five most commonly reported intervention programmes, activities and approaches and the five most commonly reported outcomes targeted for each age group in each of the skills areas (communication, language, speech, fluency and social/learning)<sup>17</sup>. Finally, we also report the most common patterns of delivery for the interventions. Further data tables are available in appendix 3 detailing the interventions and outcomes across ages.

#### **4.3.1 Under two years**

Of the 536 SLTs who responded, 3.2% (n=17) indicated that their most typical child would be under the age of two years. These numbers are small so findings from this section must be treated with caution.

The most typical children seen by these SLTs had the more severe SEN, including profound and multiple learning difficulties (PMLD), severe learning difficulties (SLD) and multisensory impairments. Typically these children were being seen in child development centres, the children's own homes and in hospital based centres.

Table 4.8 shows the five most commonly reported intervention programmes, activities and principles that SLTs use with this age group and table 4.9 shows the outcomes that were targeted. SLTs did not target speech or fluency outcomes with this age group.

With these very young children, as you might expect, intervention was typically delivered throughout the day (88%) via the parent (77%) or nursery staff (12%). There was no particular pattern to the frequency that SLTs met with the child although once a month was the most common (35%); the period over which intervention was carried out was either over a year or more (35%) or over a 6 week period (29%).

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<sup>17</sup> More than five items are included where there are ties.

**Table 4.8 Interventions used with children under the age of two years (% SLTs)**

	%
<b><i>Programmes</i></b>	
Makaton	82
Derbyshire Language Scheme	76
Intensive interaction	59
Hanen	53
PECS	53
<b><i>Activities</i></b>	
Auditory discrimination	35
Other	24
Auditory bombardment/ Focused audiology stimulation	18
Phonological awareness	12
Barrier games	6
<b><i>Principles &amp; approaches</i></b>	
Creating language rich environment	94
Modelling	94
Signing	94
Parent child interaction	88
Reducing questions	82
Waiting for a response	82
Reducing distractions	77
Repetition	77
Using key words	77
Using objects of reference	77
Visual approaches to language	71

**Table 4.9 Outcomes targeted for children aged under two years list by size within each category (% SLTs)**

	%
<b><i>Communication</i></b>	
Communication skills	88
Parent-child interaction	88
Preverbal skills	77
Attention& listening	71
Social skills	53
Provision of a means of communication	53
<b><i>Language</i></b>	
Understanding	71
Expression	41
Vocabulary	35
<b><i>Social/learning</i></b>	
Enjoyment of communication	47
Opportunity to communicate	47
Parents' skills	41
Relationships	35
Inclusion	35
Confidence	35
Independence	35
Teacher skills	35
Behaviour	35

*N* = 17

#### **4.3.2 Age 2-3 years**

As shown in Table 4.1 above, 21% (n= 114) of SLTs indicated that this age group was their most typical. Just under half of the SLTs (44%) working with this age group indicated that SLCN (language) was the most common SEN category with a further 18% indicating that ASD was their most common. SLTs indicated that the most common settings in which they worked with this age group were children's centres (23%), preschool nurseries (20%) and community clinics (28%) although child development centres and 'other' were also mentioned frequently (10% and 15% respectively).

Table 4.10 shows the intervention programmes, activities and approaches that were reported as being used with this age group. The range of intervention programmes is identical to those reported with the under two age group; the range of activities and approaches is overlapping but more extensive with this age group. Table 4.11 shows the outcomes targeted with children aged 2-3 years. Overall, communication outcomes predominated, followed by language outcomes, then social outcomes. Fluency outcomes were not targeted in this age group. Expression and understanding of language, use of basic communication skills and parent-child interaction were the outcomes most frequently targeted by SLTs.

Once again, the most common pattern of delivery of interventions for this age group was via parents (64%) and nursery staff (17%) throughout the day (61%). Although some indicated that it would be delivered daily (12%) or 2-3 times per week (16%), the sessions with the SLT were most typically once a week (43%) with a further 18% indicating that it would be once a fortnight or once a month. The most common time period over which an intervention was delivered was either 6 weeks (34%) or three months (28%).

**Table 4.10 Interventions used with children aged 2-3 years (% SLTs)**

<b><i>Programmes</i></b>	<b><i>%</i></b>	<b><i>Activities</i></b>	<b><i>%</i></b>	<b><i>Principles &amp; approaches</i></b>	<b><i>%</i></b>
Derbyshire Language Scheme	80	Auditory discrimination	47	Modelling	94
Makaton	75	Phonological awareness	43	Reducing questions	90
Hanen	68	Barrier games	40	Repetition	90
Intensive interaction	54	Rhyme awareness	39	Creating a language rich environment	89
PECS	51	Auditory memory activities	38	Commenting	87
				Reducing distractions	87
				Forced alternatives	86

**Table 4.11 Outcomes targeted by SLTs working with children aged 2-3 years (% SLTs).**

<i>Communication</i>	<i>%</i>	<i>Language</i>	<i>%</i>	<i>Speech</i>	<i>%</i>	<i>Social/learning</i>	<i>%</i>
Communication skills	70	Understanding	74	Intelligibility	15	Improved behaviour	38
Preverbal skills	57	Expression	75	Phonological awareness	10	Improved relationships	39
Attention & Listening	66	Vocabulary	61	Sound system	11	Enjoyment of communication	36
Parent-child interaction	73			Consistency	10	Opportunities to communicate	41
Provision of a means of communication	45			Oromotor skills	6	Parents' skills	40

*N* = 114

### **4.3.3 Age 4-5 years**

Nearly one quarter of our sample (24%) indicated that their most typical child was aged between 4 and 5 years. The most common SEN category within this age group was primary SLCN (speech: 47%) followed by SLCN (language: 27%). Typically SLTs worked in community clinics (35%) and mainstream schools (26%); 'other' settings were also mentioned frequently (17%) and predominantly these were the children's own homes. Table 4.12 shows the interventions that were used with this age group. Unlike SLTs working with the younger children, these therapists use programmes such as Nuffield Programme and Core Vocabulary, reflecting their focus on children with SLCN (speech). Similarly their use of intervention activities, principles and approaches reflects a greater emphasis on speech and language related interventions rather than broader communication interventions. The targeted outcomes were fairly evenly distributed across communication, language, speech and social outcomes with no one aspect predominating (Table 4.13); fluency was targeted in only a small minority of cases. There was no emphasis on targeting preverbal skills, presumably reflecting that the children being seen in the mainstream school and community clinics are predominantly verbal.

Parents were still the most common deliverers of the interventions for this age group (48%), with teaching assistants also common (36%). The most common frequency was 2-3 times per week (38%) for this age group although daily (27%) and throughout the day were also common (26%). Just over half of the SLTs were most typically seeing children of this age once a week (52%), with smaller proportions seeing them 2-3 times per week (11%) or once

a fortnight n(11%). The most common period for interventions was either 6 weeks (32%), 3 months (26%) or over a year or more (23%).

**Table 4.12 Intervention programmes, activities, principles and approaches used with children aged 4-5 years (% SLTs).**

<i>Programmes</i>	<i>%</i>	<i>Activities</i>	<i>%</i>	<i>Principles &amp; approaches</i>	<i>%</i>
Derbyshire Language Scheme	70	Auditory discrimination	77	Modelling	93
Nuffield	60	Phonological awareness	77	Repetition	87
Makaton	56	Minimal pair discrimination	76	Forced alternatives	86
Hanen	43	Barrier games	69	Providing feedback	84
Core vocabulary	39	Traditional articulation activities	65	Commenting	76
		Auditory memory	62		

**Table 4.13 Outcomes targeted by SLTs working with children aged 4-5 years (% SLTs)**

	%
<b>Communication</b>	
Attention and Listening	39
Communication skills	35
Parent-child interaction	26
Provision of a means of communication	24
Social Skills	23
<b>Language</b>	
Expression	48
Understanding	47
Vocabulary	33
Narrative	17
Word finding	17
<b>Speech</b>	
Intelligibility	55
Sound system	50
Phonological awareness	45
Consistency	44
Oromotor skills	20
<b>Fluency</b>	
Decreased stuttering	8
Reduced severity	8
Increased participation	8
Awareness of fluency	7
<b>Social/educational</b>	
Confidence	41
Enjoyment of communication	34
Parents' skills	34
Independence	33
Teacher skills	32
Greater inclusion	31
Access to the curriculum	31
Opportunities to communicate	31

#### **4.3.4 Age 5-7 (key stage 1)**

SLTs working with this age group were the largest group responding to the survey (28%) by a small margin over those working with children aged 4-5years. For just under half of the SLTs working with this age group (45%), the most common SEN category was SLCN (language); approximately 20% were working mostly with SLCN (speech) and approximately 8% were working with children with ASD, SLD or SpLD. The majority of SLTs working with this age group of child were working in mainstream schools (63%), special schools (14%) or resource bases (11%).

Table 4.14 shows the interventions in use with this age group. These reflect the greater emphasis on language than in the previous age group. This was the first age group that the use of visual timetables was amongst the more frequently used approaches.

Table 4.15 shows the outcomes targeted by SLTs working with this age group. As previously, only a small minority of SLTs reported that they were focusing on children's fluency. Apart from this there was a spread of outcomes across the different skill areas. The emphasis has shifted here from a focus on parents' skills in the preceding younger age group to an emphasis on teacher skills for this age group.

SLTs were most commonly working with teaching assistants (65%) to deliver intervention with children in this age group, but were also working with teachers (14%) and parents (15%). Although delivery by these other practitioners throughout the day was still happening (reported by 28% of SLTs), 47% of SLTs reported that interventions were delivered 2-3 times per week. SLTs were commonly seeing the child once a week (45%) over periods of 6 weeks (30%), 3 months (25%) or a year or more (30%).

**Table 4.14 Interventions used with children aged 5-7 years (% SLTs)**

<b>Programmes</b>	<b>%</b>	<b>Activities</b>	<b>%</b>	<b>Principles &amp; approaches</b>	<b>%</b>
Derbyshire Language Scheme	72	Barrier games	86	Modelling	99
Nuffield	63	Auditory memory	84	Forced alternatives	88
Makaton	61	Phonological awareness	84	Creating a language rich environment	88
Colourful semantics	52	Auditory discrimination	78	Visual timetables	88
Social stories	51	Narrative therapy	78	Providing feedback	87
		Minimal pair discrimination	75	Visual approaches to supporting language	86
		Rhyme awareness	70	Commenting	86
				Differentiating the curriculum	85

**Table 4.15 Outcomes targeted with children aged 5-7 years (% SLTs)**

	%
<b>Communication</b>	
Attention and Listening	59
Communication skills	53
Social skills	42
Parent-child interaction	28
Provision of a means of communication	28
Inference/reasoning	27
<b>Language</b>	
Expression	68
Understanding	63
Vocabulary	57
Narrative	41
Word finding	37
<b>Speech</b>	
Intelligibility	36
Phonological awareness	30
Sound system	30
Consistency	28
Oromotor skills	16
<b>Fluency</b>	
Awareness of fluency	5
Decreased stuttering	5
Reduced severity	6
Increased participation	6
<b>Social/educational</b>	
Confidence	46
Enjoyment of communication	42
Opportunities to communication	41
Teacher skills	41
Independence	38
Greater inclusion	37

### 4.3.5 Age 7-11 years (Key stage 2)

Only 14% of our respondents indicated that children that they worked with were typically aged 7 - 11 years. In this age group, SLTs were most commonly working with children with either SLCN (Language: 39%) or ASD (17%). As with the previous age group, the majority of SLTs were working in mainstream schools (51%), special schools (25%) and resource bases (16%).

**Table 4.16 Interventions used with children aged 7-11 years (% SLTs)**

<b>Programmes</b>	<b>%</b>	<b>Activities</b>	<b>%</b>	<b>Principles &amp; approaches</b>	<b>%</b>
Colourful semantics	59	Auditory memory	80	Visual approaches to support language	96
Social stories	59	Barrier games	79	Modelling	92
Language for Thinking	55	Phonological awareness	77	Reducing distractions	92
Socially speaking	53	Narrative therapy	75	Waiting for a response	92
Becky Shanks Narrative packs	52	Auditory discrimination	61	Differentiating the curriculum	91
				Reducing questions	89
				Forced alternatives	86

The interventions used with this age group are quite distinct from the earlier age groups with few overlapping programmes at all in the top five (Table 4.16). The outcomes targeted reflect the fact SLTs were focusing mainly on children in mainstream schools with primary SLCN (language) and ASD. For example, relatively few SLTs were focusing on speech outcomes and a higher proportion of SLTs focus on supporting the development of teacher skills than on developing parent skills (Table 4.17).

For children in this age group, SLTs were working mostly with teaching assistants (72%); teachers were still involved to some extent (20%) but work with parents is considerably less common than at earlier ages (5%). Typical patterns of delivering the intervention by teaching assistants was either throughout the day (44%) or two-three times a week (40%). The most common patterns for SLTs contact with the child was once a week (41%) with a further 17% reporting that they saw the child once a term. A sizeable proportion (19%) reported that they were seeing a child more intensively (more than 2-3 times a week). As previously the most common timescales of the intervention were for a six-week period, for three months or for a year or more.

**Table 4.17 Outcomes targeted with children aged 7-11 years (% SLTs)**

	%
<b>Communication</b>	
Attention and Listening	67
Communication skills	60
Social skills	55
Inference/reasoning	44
Provision of a means of communication	33
<b>Language</b>	
Understanding	69
Expression	69
Vocabulary	59
Narrative	57
Word finding	52
<b>Speech</b>	
Intelligibility	13
Phonological awareness	12
Consistency	11
Sound system	5
Oromotor skills	4
<b>Fluency</b>	
Increased participation	8
Awareness of fluency	5
Reduced severity	4
Decreased stuttering	3
<b>Social/educational</b>	
Confidence	71
Independence	61
Access to the curriculum	65
Opportunities to communication	61
Improved behaviour	60
Teacher skills	60
Greater inclusion	57

#### 4.3.6 Age over 11 years (key stage 3-4 and post-16)

Only 7 SLTs who were working with young people above the age of 15 responded so that age group has been combined with the 11-14 group, but caution must be used in interpreting these small numbers. Altogether, just over 8% of our respondents were working with children and young people in key stage 3 and beyond. There was quite a spread of SEN categories in this age range, but children with ASD, SLD and SLCN language and communication predominated. Most SLTs worked in special schools (46%) mainstream schools (40%).

The interventions featured for this age group (table 4.18) give more emphasis to the social and functional use of language. Similarly the outcomes targeted (table 4.19) focus on social and communicative outcomes. So for example, the speech-related outcomes focus primarily on the intelligibility of the children and young people rather than on the development of speech sounds per se.

As before, SLTs reported that they were most typically working with teaching assistants (58%) and teachers (28%). Work with parents was less common (7%). Interestingly, the more common pattern of delivery in this age group is throughout the day (44%) although 2-3 times a week was still used in some cases (22%). SLTs reported that they themselves saw the children and young people most commonly once a week (36%) or throughout the day (22%), over an extended period of one year or more (36%) or for a six week period (27%).

**Table 4.18 Interventions used with children and young people aged over 11 years (% SLTs)**

<i>Programmes</i>	<i>%</i>	<i>Activities</i>	<i>%</i>	<i>Principles &amp; approaches</i>	<i>%</i>
PECS	36	Phonological awareness	62	Modelling	93
Social stories	36	Auditory discrimination	60	Visual timetables	89
Talkabout	29	Auditory memory	58	Using key words	87
Socially speaking	26	Narrative therapy	55	Waiting for response	87
Social use of language	25	Barrier games	41	Providing feedback	84
Living language	21			Differentiating the curriculum	80
Comic Strip conversations	19				

**Table 4.19 Outcomes targeted with children and young people aged over 11 years (% SLTs).**

	%
<b><i>Communication</i></b>	
Communication skills	76
Social skills	60
Attention and listening	60
Inference/reasoning	44
Provision of a means of communication	33
<b><i>Language</i></b>	
Understanding	62
Expression	53
Vocabulary	51
Word finding	40
Narrative	38
<b><i>Speech</i></b>	
Intelligibility	84
Phonological awareness	13
Consistency	13
Sound system	7
Oromotor skills	7
<b><i>Fluency</i></b>	
Increased participation	7
Awareness of fluency	2
<b><i>Social/educational</i></b>	
Greater inclusion	67
Opportunities to communicate	62
Improved relationships	60
Confidence	60
Independence	60
Access to the curriculum	60
Self monitoring	60
Enjoyment of communication	56

## **4.4 Outcomes**

The outcomes targeted by SLTs for each age group have been reported in the preceding section (4.3). In this section we report the key areas of outcome (ie, whether this is speech, language, communication or social/learning) by SEN category and then, finally, SLTs responses regarding their current measurement and reporting practices.

### ***4.4.1 Outcomes targeted by type of special educational need.***

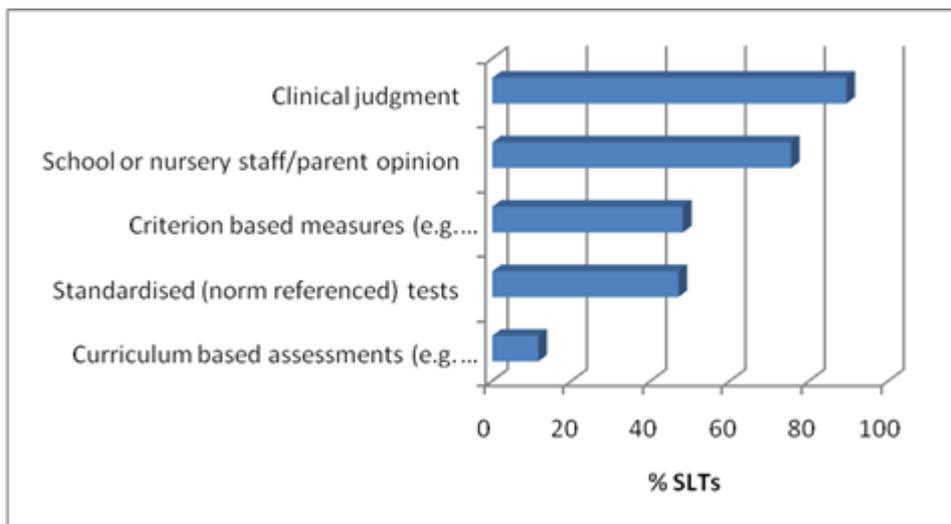
Table 4.20 shows the proportion of SLTs who target a particular type of outcome for each SEN category. For example, of the 104 SLT's whose most typical child had Primary SLCN with speech as the main difficulty, 44 % would target communication outcomes, 25% would target language outcomes, 89% would target speech outcomes, 12% would target fluency outcomes, and 44% would target social or learning outcomes. Further data on outcomes by SEN category are provided in Appendix 7 tables A13-16. Table 4.20 shows that for most SEN categories, SLTs are targeting outcomes across all five outcome areas. In all SEN categories except for primary SLCN (speech), communication is a key target outcome. In the three primary SLCN categories, the main target outcome is the same as for the main area of difficulty; so speech is the main target in the case of primary SLCN (speech), language is the main outcome for primary SLCN (Language) and communication is the main target for primary SLCN (communication).

**Table 4.20 Outcomes targeted by SEN category (% SLTs)**

	Communication %	Language %	Speech %	Fluency %	Social/ Learning %	<i>n</i>
SpLD	84	81	48	23	61	31
MLD	89	89	22	11	78	27
SLD	95	62	13	8	56	39
PMLD	94	35	6	6	47	17
Physical	89	44	11	0	56	9
BESD	88	50	13	0	75	8
ASD	92	66	2	0	69	61
HI	85	77	46	23	69	13
Multi-sensory	100	75	25	0	50	4
Primary- speech	44	25	89	12	44	104
Primary- language	80	96	25	13	49	193
Primary- communication	93	80	20	13	80	30

**4.4.2 Outcome measurement and reporting**

When undertaking their most frequently used intervention, the most common broad outcome measures used were clinical judgement (89% of SLTs) or the opinions of other practitioners, e.g. teachers, or the parents (75%) (respondents were invited to select all that were applicable) – see Figure 4.1. Just under half reported using criterion based measures such as checklists or standardised (norm referenced) tests, with 12% reporting the use of curriculum based assessments (e.g. Standard Assessment Tasks: SATs). Two thirds (66%) of SLTs said that they did not submit outcome data to their head of service for service level monitoring. When asked about use of a specific system for reporting outcomes the most common (reported by the minority that reported outcomes) was the East Kent Outcomes System (EKOS) or an EKOS-based system (64 mentions, 12% of all SLTs).



**Figure 4.1 Measures of broad outcomes used by SLTs**

## 5. DISCUSSION

This project set out to explore the interventions being used in current practice with children with SLCN, through interviews with educational psychologists, advisory teaching services and SLT team leaders and a survey of SLT's practice. It became apparent during the interviews that differences remain in the ways education professionals and SLTs classify children, with SLTs tending to think in terms of diagnostic labels and educational professionals tending to think in terms of educational needs as defined by the Code of Practice and School Census categories.

However, there are three further complications. First, within the education system in England, it is recognised that children and young people may have a *primary* special educational need and, in many cases, a secondary special educational need. So, for example, a child with hearing impairment as their primary special need may also have significant behavioural, emotional and social difficulties as a secondary need. Speech, language and communication needs (SLCN) is a separate category of SEN. Secondly, the SLCN category is not defined in a way that is exactly synonymous with the category of specific language impairment (SLI), the most common term used for primary language difficulties by SLTs, in the UK, although they are very similar.

The third issue is that the Bercow Review deliberately used the term 'speech, language and communication needs', in its broad sense, to encompass all children who had difficulties, and hence needs, relating to speech, language and/or communication. This comprehensive use included children with other primary special educational needs, e.g. hearing impairment, physical disability, moderate learning difficulties and more, where SLCN may be their secondary need.

Within our survey, in order to differentiate children with primary and specific speech and language impairments, the 'SLCN' category was specified as 'primary SLCN' and further differentiated as 'SLCN with primary problems with either speech, language or communication'.

The SLTs in our survey used all three of these categories and indeed the majority of participants (just over 60%) indicated that their most typical children fell within one of these categories. For some categories of SEN very few SLTs selected a child with that primary need as their most typical child; for example, children with hearing impairment, physical

difficulties, behaviour and social-emotional difficulties, and children with multi-sensory difficulties all had fewer than ten SLTs responding. Therefore data regarding these groups of SEN must be treated with caution. Finally, it is important to bear in mind that some diagnostic categories used in the field of speech and language therapy, such as voice disorders and stammering are not recognised as SEN categories in their own right.

The overall aim of the 'Exploring Interventions' component of the Better Communication Research Programme, was to identify the evidence supporting current practice. Interventions identified in this project contributed to those included in the 'What Works' report<sup>18</sup>. The particular questions addressed by this project were:

- What is the range of interventions being used in current practice?
- What interventions are used with children and young people from differing age groups, settings and with differing special educational needs?
- What rationales and explanations do practitioners provide for the selection of different interventions?
- What outcomes are targeted with these different interventions?

These questions are considered below.

### **5.1 What is the range of interventions being used in current practice?**

The definitions of 'intervention' in the literature were wide ranging. So in order to capture the full range in use, we made no attempt in the interviews to constrain how participants talked about interventions. As a result, participants described interventions at a number of different levels: for example, from named or published programmes made up of a package of activities to specific or single intervention activities or even resources that they used within interventions. We identified eight broad groupings of interventions:

- programmes,
- activities,
- principles or approaches,
- service developed programmes,
- resources,

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<sup>18</sup> 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.

- training packages,
- models or theories of intervention, and
- targets of intervention.

There was no single or structured way of describing the interventions used either in the interviews or in the documentation we reviewed. This perhaps reflects the literature in that no standard format is used to describe interventions within published interventions or in research reports of interventions.

In the interview phase, the educational psychologists, advisory staff managers and SLTs identified 158 different interventions; a further 20 programmes were identified in the survey along with a range of other training programmes, resources, approaches and activities.

There are three notable observations about the final lists of interventions.

First, the number of available interventions is enormous. This seems entirely reasonable if one considers that children and young people are learning a particular skill over long periods. The survey indicated that, for almost a third of SLTs, it was common for the interventions to last for a year or more. In such circumstances, there is clearly a need for variety in order to keep the interventions interesting and motivating for the children and young people and indeed also for the adults delivering the interventions.

Second, the overlapping nature of the interventions makes it difficult to identify how interventions (particularly the intervention programmes) differ from each other. For example, if we take the area of social use of language, the list in appendix 4 shows a number of programmes targeting this area. For example, Talkabout, (Kelly, 1997) and the Social Use of Language Programme (Rinaldi, 1995), both have components that target social language skills in adolescents; both focus on self awareness and awareness of others, both focus on aspects of social communication such as eye contact, listening and turn taking. Byng and Black (1995), question whether there is a difference between various interventions and it is indeed difficult to identify the unique or differentiating aspects of some interventions without indepth analysis and testing. If interventions were routinely described using a structured format, this kind of comparative analysis would be easier (McCauley & Fey, 2006).

Third, there were a large number of locally developed programmes. About 28% of therapists said they were using a locally developed intervention sometimes or frequently; there was some indication that this was more likely to be the case if SLTs were working with older

children and young people and it may be that these are contexts in which there are fewer ready-made interventions available and therefore practitioners are constructing their own. Once again, there was no standard format for such interventions to be described and we are not able within this study to indicate the distinct and unique elements of these service developed interventions. It is not clear whether they were developed because local services considered that there was nothing suitable and appropriate to the local context or how far they are adaptations and combinations of existing interventions. As indicated above, a systematic description would allow deconstruction and comparison so that the components can be clearly identified, compared and tested.

## **5.2 What interventions are used with children and young people from differing age groups, settings and with differing special educational needs?**

The survey asked SLTs to indicate their most typical child, in terms of age, SEN category and setting. We opted to describe the interventions in use from the perspective of age group. As education practitioners had indicated in the interviews that they did not group children according to their diagnostic or SEN category but rather according to their individual needs, it was felt that reporting the survey findings according to SEN category would not be particularly relevant across health and education. The description of interventions used in the different age groups shows a clear progression from a focus on the establishment of fundamental communication skills in the very early years to the development of language and subsequently to a focus on speech sound development around the age of 4-5 years. In key stages 1 and 2 (ages 5-11 years) the emphasis seems to shift back to the development of language skills. In key stage 3 and beyond (age 11 years and above), interventions seem to focus on the development of social language and the appropriate use of language. This seems to impact upon the intervention programmes used rather than intervention activities. So for example, the Derbyshire Language Scheme and Makaton were consistently in the top five interventions up to the age of 7 years, but not beyond. Social Stories features in the top five interventions only from age 5 upwards; the Nuffield programme is amongst the top five between the ages of 4-7 years. Interestingly, the Picture Exchange System was amongst the top five for the early years (0-3 years) and then again with young people aged over 15 years. This is probably related to the most typical children and young people seen by SLTs responding in these age groups. It seems that at the extremes of the age spectrum, the children and young people seen by our respondents were the more severely impaired individuals.

### **5.3 What rationales and explanations do practitioners provide for the selection of different interventions?**

From the analysis of the survey we can see that the selection of interventions varies with age and SEN category. But we cannot tell from the survey data which are the particular drivers for selecting interventions. From the interviews, there is some evidence that rationales for the choice of interventions are often quite pragmatic, setting up an intervention in a way that included greater numbers of children or because it was popular. Participants also indicated that interventions were selected because they were perceived to be effective. In some cases, participants referred to an evaluation that had been carried out on a particular programme, but often they were referring to an approach that was perceived to be more effective such as the use of groups, or visual approaches.

In the associated 'What works' project<sup>19</sup>, we investigated the evidence available for the interventions that were mentioned in the interviews and were most frequently used according to the survey. From the programmes listed in Appendix 4, the majority (n=32) were not listed in the 'What Works' report since there was insufficient research to evaluate the level of evidence. Thirteen had 'indicative' levels of evidence, meaning good face validity but research evidence was limited to case studies or 'before and after' studies. A further ten had 'moderate' evidence, which included evidence from a single randomised controlled trial or quasi-experimental studies. Only one (the Lidcombe Program) had strong evidence supporting its use. Two programmes had research which contra-indicated their ongoing use; for example showing that the intervention had no effect over and above a no treatment control. A small number of intervention activities and approaches were covered in the 'What Works' report, including the use of 'visual support for language' and the use of 'broad target recasts' which had indicative and moderate levels of supportive evidence respectively. As yet the research literature does not provide contrastive evidence between similar programmes.

### **5.4 What outcomes are targeted with these different interventions?**

In the interviews, respondents were able to provide descriptions of the kinds of outcomes targeted by the various interventions they offered. The range of outcomes that were

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<sup>19</sup> 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.

identified in the interviews was confirmed in the survey by SLTs, but the survey data show patterns of outcome that reflect the needs and difficulties of the different SEN categories. For example, few therapists focus on intelligibility as an outcome for children with profound and multiple learning difficulties (PMLD) but focus instead on communication and social skills. Speech outcomes were not targeted at all for the under twos and only for less than 15% of children of 2-3 years of age. For SLTs dealing with children and young people of all ages, there was relatively less emphasis on targeting oromotor skills than specific speech outcomes such as developing the sound system, phonological awareness, consistency and intelligibility. This perhaps reflects the dearth of evidence supporting the impact of oromotor interventions on speech. As with the selection of interventions, we cannot tell from these data whether it is the diagnostic category or the age of the child that drives the selection of outcomes or, more likely, whether it is the typical pattern of needs and difficulties associated with the diagnostic categories that is the key driver. The analysis of outcomes that are targeted in association with SEN categories shows that communication predominates across all those whose speech, language and communication needs are secondary to other developmental difficulties. Target outcomes for those whose SLCN are primary and not associated with other SEN categories, reflect whether SLTs identify their primary difficulty as speech, language or communication. Independence and inclusion, the two overarching outcomes valued by parents of children with SLCN<sup>20</sup> seemed to attract similar levels of focus across SEN categories and were more likely to be the targets in children aged over 11 years, but they were not always the most frequently identified outcomes.

Data from the survey confirmed the finding from the interviews that SLTs measured outcomes mainly at the level of the single child. It is surprising that, in an era of outcomes-based commissioning (Department of Health, 2010) where the emphasis is on showing the impact and value of services, two thirds of the SLTs responding to the survey were not required to provide outcome data for management. Participants in both the interviews and survey were clearly able to identify the outcomes of the interventions they used. However, it seems likely that the measures currently in use do not necessarily capture the outcomes that were being targeted, for example capturing the number of goals attained rather than measuring changes in children's functional communication skills. The measure mentioned most frequently as a mechanism for service level outcome capture is one that focuses on the achievement of mutually agreed objectives.

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<sup>20</sup> 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.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The interviews and survey have identified a large number of interventions in use with children and young people with SLCN. There was no consistency in the way these interventions were described. Practitioners have many interventions to choose from and make their selections on pragmatic grounds as well as evidence-based grounds. Indeed the evidence-base for many of the intervention programmes currently in use is largely indicative and at an early stage of development. As well as the large number of published programmes, services continue to develop their own programmes, adapting and combining activities and approaches and developing new resources to suit their local populations. These locally developed interventions do occasionally have local evaluations, but it is common practice to introduce locally developed schemes without prior or subsequent data regarding their impact or effect. The outcomes targeted by the interventions cover the range of communication, language, speech and social communication skills and reflect the broad SEN categories of the children. However, outcomes are collated at a service level by only a third of our sample. The outcome measures that are collected by services generally focus on the number of objectives that have been achieved and do not necessarily reveal whether or not children and young people are achieving the outcomes that parents and children themselves have identified as their preferred outcomes.

### 6.1 Recommendations for practice

Interventions should be described using a consistent framework so that the outcomes, techniques and theoretical underpinnings are transparent. Details of delivery mechanisms and resources used can also be added for further clarification. Appendix 8 provides examples of how this might be structured.

The development of further interventions at a service level should proceed with caution and only following a review of existing interventions. The 'What Works' report provides ten criteria by which existing interventions could be evaluated<sup>21</sup>. Any new interventions developed by services should make explicit how they vary from existing interventions.

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<sup>21</sup> 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.

## **6.2 Recommendations for research**

There are a number of well-used interventions that have little evidence to support their implementation in practice. Targeting a number of these popular interventions would help to increase our understanding of the impact of intervention on children and young people with SLCN.

In order to compare existing programmes it will be necessary to deconstruct and analyse the similarities and differences between existing programmes.

## **6.3 Recommendations for policy**

The most pressing need at service and national level is for a stronger focus on outcomes for children and young people. These should reflect the outcomes targeted by services as well as those valued by parents and children. Further they should reflect the primary SLCN and learning needs of the child, so that for children with primarily speech difficulties, services should be collecting speech relevant outcomes as well as those relating to parents' interests in independence and inclusion. Appendix 9 provides examples of how these might work for different groups of children.

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## 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 2<sup>nd</sup> 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 SUMMARY OF PARTICIPANT SITES FOR INTERVIEWS

**Table A.1 Summary of participant sites for interviews**

	Type of area	SLT service interviewed (phase 1/2)	EP service interviewed (Phase 1/2)
1	Shire county	1	1*
2	Inner London LA	1	2
3	Shire county	1	1
4	Shire county	1	1
5	Urban	1	-
6	Shire county	1	-
7	Urban	1	1
8	Urban	1	1*
9	Shire county	1	1**
10	Shire county	1	1*
11	Urban	1	2*
12	Urban	1*	-
13	Urban	2	2*
14	Urban	2	-

Note:

\*additional local authority personnel participated in the interview e.g. advisory teachers, specialist teachers

\*\*additional interview carried out with Integrated Disability Service

**APPENDIX 3 OUTCOMES TARGETED BY INTERVENTION PACKAGES, ACTIVITIES AND APPROACHES.**

**Table A.2 Outcomes targeted by intervention packages, activities and approaches.**

<b>Outcomes</b>	<b>Intervention packages</b>	<b>Intervention activities</b>	<b>Principles and approaches</b>
<b>A. Communication:</b>			
Social skills	Talkabout, Hanen, BLAST, Talking Partners, Social Use Language Programme, Socially Speaking, Circle of Friends, Social Stories,		
Nonverbal communication	Intensive Interaction, Time to Talk,		
Initiation	Picture Exchange Communication System		
Sharing information	Social Stories		
Inference/verbal reasoning	Language for Thinking		
Attention and listening	Spirals, Talking Partners, BLAST,	barrier games, auditory memory activities, auditory discrimination activities, cued articulation	
Use and understand English (deaf/hearing impaired population)	Cued Speech		

Provide a means of communication			signing, British Sign Language, Alternative and Augmentative Communication, total communication
Parent-child interaction patterns			Parent Child Interaction
<b>B. Language:</b>			
Understanding of language	BLAST, Derbyshire Language Scheme, Visualize and Verbalize,		visual approaches to support language, symbols, chunking, repetition, forced alternatives, reduced distractions, use of key words, providing feedback
Expressive language structure	Becky Shanks Narrative Pack, Colourful Semantics, Socially Speaking, Talking Partners, Hanen, Derbyshire Language Scheme,		language rich environment, modelling, extending, repetition, reducing questions, use of key words, commenting
Range of sentence elements	Colourful Semantics		
Narrative skills	Becky Shanks Narrative Pack		
Vocabulary		narrative therapy, extending, repetition, forced alternatives, use of key words	
Fluency of language production		narratives	

Specificity of language		barrier games	
Concept knowledge		auditory memory activities	use of symbols
Word finding			chunking
Recall of information			use of symbols
<b>C. Speech sound system:</b>			
Intelligibility	Nuffield		
Phonological awareness		phonological awareness and rhyme awareness activities, minimal pair discrimination	
Metaphonological skills	Metaphon, BLAST,		
Change in speech sound system	Metaphon, Speech Link		
Consistency of speech production	Core Vocabulary		
Oro-motor skills	Bobath		
Speech sounds in isolation	Metaphon,	traditional articulation	
Speech sounds in words and sentences		minimal pair production, minimal pair discrimination, auditory bombardment, traditional articulation	
Identification of speech sounds		cued articulation, auditory discrimination	

Discrimination between similar words		auditory discrimination	
<b>D. Fluency:</b>			
Speak fluently	Lidcombe		
Awareness of fluency	Lidcombe		
<b>E. Other:</b>			
Confidence	PEEP (Peers Early Education Partnership), Socially Speaking, Circle of Friends, Signalong		commenting, visual approaches, visual timetable
Self esteem	PEEP , Socially Speaking, Circle of Friends, Signalong		
Independence	Signalong, TEACCH		providing feedback, waiting for response, reducing questions, task management boards, workstations, use of symbols
Behaviour	Applied Behaviour Analysis, Social Stories, Circle of Friends, TEACCH		
Relationships	Signalong, Circle of Friends, PEEP		
Inclusion	Circle of Friends		
Enjoyment of communication	Lidcombe		
Access to the curriculum	Spirals		chunking, differentiating the curriculum
Opportunities to communicate			creating a language rich environment

Self-monitoring/self-awareness	Lidcombe, Talkabout,	barrier games, increasing awareness of errors, providing feedback	
Parent skill/awareness	Hanen, Spirals, PEEP (Peers Early Education Partnership), Lidcombe,		Parent Child Interaction
Teacher/teaching assistant skill/awareness	Speech Link		
Literacy	Colourful Semantics, PEEP (Peers Early Education Partnership), Hanen, Picture Exchange Communication System, Visualise and Verbalise	phonological awareness activities, cued articulation	
Auditory memory/recall		auditory memory activities	

## APPENDIX 4 MOST TYPICAL SETTING IN WHICH SLTS WORK, BY AGE GROUP

**Table A.3 Most typical setting in which SLTs work, by age group**

	Under 2	2-3 years	4-5 years	5-7 years	7-11 years	Over 11 years	Total N
Children's centre	2	26	3	1	0	0	32
preschool nursery	0	22	12	1	0	0	35
community clinic	1	32	47	10	1	0	91
mainstream school	0	3	35	96	38	18	190
CDC	7	12	4	0	0	0	23
Resource base	0	2	5	17	12	2	38
special school	0	0	5	21	19	21	66
other	7	17	22	6	5	4	61
Total N in each age group	17	114	133	152	75	45	536

**Table A.4 Most typical SEN category that SLTs work with in each age group**

	under 2	2-3 years	4-5 years	5-7 years	7-11 years	Over 11 years	Total N
SLCN(L)	1	50	36	69	29	8	193
SLCN(S)	0	5	63	30	5	1	104
SLCN(C)	0	11	4	3	5	7	30
ASD	0	21	5	12	13	10	61
SLD	2	9	3	12	6	7	39
SpLD	1	3	10	11	5	1	31
MLD	1	5	3	7	6	5	27
PMLD	6	3	5	1	1	1	17
HI	1	5	2	4	1		13
Phys D	1	2	1	1	1	3	9
BESD	1			2	3	2	8
Multisensory	3		1				4
total	17	114	133	152	75	45	536

## APPENDIX 5 A FULL LIST OF ALL INTERVENTION PROGRAMMES MENTIONED IN THE INTERVIEWS AND SURVEY.

**Table A.5 A full list of all intervention programmes mentioned in the interviews and survey.**

ABA - Applied Behaviour Analysis
Auditory input therapy
Becky Shanks Narrative packs
BLAST - Boosting Language Auditory Skills and Talking
Bobath approach
Circle of Friends
Colourful Semantics
Comic Strip Conversations (Carole Grey)
Core Vocabulary
Cued Speech
Cycles therapy
Derbyshire Language Scheme
Earobics
Fastforward
Hanen
(The) Imagery Approach
Intensive Interaction
Jolly Phonics
Language for Thinking
Language Land
Language Link
LEGO therapy
Lidcombe Program
Lindamood Phoneme Sequencing Program
(The) Listening Programme
Living Language
Look 2 Talk
Makaton
Maximal oppositions and empty set
Metaphon
Multi-sensory input modeling
Multiple oppositions therapy
Nonlinear phonological therapy
Nuffield
Nurturing Talk
Parent-Child Interaction Therapy
PECS - Picture Exchange Communication System

PEEP - Peers Early Education Partnership
POPAT - Programme of Phonological Awareness Training
PROMPT
Shape Coding
Signalong
Socially Speaking
Social Skills Improvement Programme
Social Stories (Carole Grey)
Social Use of Language Programme
Speech Link
Spirals
STEP programme for selective mutism
Susan Myers Bumpy speech
Swindon Dysfluency pack
Talkabout (Alex Kelly)
Talking Partners
Talk to your Bump
THRASS
TEACCH - Treatment and Education of Autistic and related Communication handicapped Children
Time to Talk
Teaching Talking
Visualise and Verbalise
Word Wizard Vocabulary

## APPENDIX 6 INTERVENTIONS BY AGE

**Table A.6 SLTs' use of intervention programmes by age group of children in years (% using 'sometimes' or 'frequently')**

	0-2	2-3	4-5	5-7	7-11	11-14	15+
Makaton	82	75	56	61			
Derbyshire Language Scheme	76	80	70	72			
Intensive interaction	59	54					
Hanen	53	68	43				
PECS	53	51					57
Nuffield			60	63			
Core vocabulary			39				
Colourful semantics				52			
Social stories				51	59	61	57
Language for Thinking					55		
Socially speaking					53	55	57
Becky Shanks Narrative packs					52		
Talkabout						68	57
Comic strip conversations						50	
Service developed programme						45	
Living Language							71
Social use of language							71
<i>n</i> =	17	114	133	152	75	38	7

**Table A.7 SLTs' use of intervention activities by age group in years (% using 'sometimes' or 'frequently')**

	0-2	2-3	4-5	5-7	7-11	11-14	15+
Auditory discrimination	35	47	77	78	61		14
Other intervention activities	24					47	
Auditory bombardment/ Focused audiology stimulation	18						
Phonological awareness	6	43	77	84	77	50	
Barrier games		40	69	86	79	58	
Rhyme awareness		39					
Auditory memory		38		84	80	45	2
Minimal pair discrimination/production		76					
Traditional articulation activities		65					
Narrative therapy				78	75	68	2
<i>n</i> =	17	114	152	152	75	38	7

**Table A.8 SLTs' use of intervention principles and approaches by age group in years (% using 'sometimes' or 'frequently')**

	0-2	2-3	4-5	5-7	7-11	11-14	15+
Creating language rich environment	94	89		88			
Modelling	94	94	93	99	92	92	100
Signing	94						
Parent child interaction	88						
Reading questions	82	90					
Waiting for response	82				92		
Repetition		90	87				
Commentary		87	76				
Reducing distractions		87			92		100
Forced alternatives			86	88			
Providing feedback			84	87		87	
Visual timetables				88		90	
Visual approaches to support language					96	100	100
Differentiating the curriculum					91		
Using key words						87	
Total communication							100
Alternative & augmentative communication							100
<i>n</i> =	17	114	133	152	75	38	7

## APPENDIX 7 OUTCOMES BY AGE

**Table A.9 Communication outcomes by age (% SLTs)**

	under 2 years %	2-3 years %	4-5 years %	5-7 years %	7-11 years %	11+years %
Improved social skills	53	43	23	42	55	60
Communication skills	88	70	35	53	60	76
preverbal	77	57	19	15	20	9
Inference reasoning	12	9	9	27	44	44
Attention listening	71	66	39	59	67	60
Parent-child interaction	88	73	26	28	21	9
Provision of a means of communication	53	45	24	28	33	33
<i>n</i>	17	1124	133	152	75	45

**Table A.9 Language outcomes by age (% SLTs)**

	under 2 years %	2-3 years %	4-5 years %	5-7 years %	7-11 years %	11+years %
Expression	41	75	48	68	69	53
Narrative	0	11	17	41	57	38
Vocabulary	35	61	33	57	59	51
Word finding	0	12	17	37	52	40
<i>n</i>	17	114	133	152	75	45

**Table A.10 Speech outcomes by age (% SLTs)**

	Under 2 years %	2-3 years %	4-5 years %	5-7 years %	7-11 years %	11+years %
Intelligibility	0	15	55	36	13	84
Phonological awareness	0	10	45	30	12	13
Sound system	0	11	50	30	5	7
Consistency	0	10	44	28	11	13
Oromotor	0	6	20	16	4	7
<i>n</i>	17	114	133	152	75	45

**Table A.11 Fluency outcomes by age (% SLTs)**

	under 2 years	2-3 years	4-5 years	5-7 years	7-11 years	11+years
	%	%	%	%	%	%
Awareness of fluency	0	2	7	5	5	2
Decreased stuttering	0	4	8	5	3	0
Reduced severity	0	3	8	5	4	0
Increased participation	0	5	8	6	8	7
<i>n</i>	17	114	133	152	75	45

**Table A.12 Social/learning outcomes by age (% SLTs)**

	under 2 years	2-3 years	4-5 years	5-7 years	7-11 years	11+years
	%	%	%	%	%	%
Confidence	35	34	41	46	71	69
Independence	35	30	33	38	61	69
Improved behaviour	35	38	29	36	60	56
Improved relationships	35	39	29	31	49	60
Greater inclusion	35	25	31	37	57	67
Enjoyment of communication	47	36	34	42	55	56
Access to the curriculum	18	26	31	41	65	60
Opportunities to communicate	47	41	31	41	61	62
Self monitoring	6	11	29	35	51	60
Parents skills	41	40	34	29	24	18
Teacher skills	35	30	32	41	60	47
Literacy	0	3	18	21	35	27
Auditory memory	6	6	20	26	47	36
<i>n</i>	17	114	133	152	75	45

## APPENDIX 8 OUTCOMES BY SEN CATEGORY

**Table A.13 Outcomes targeted by interventions for *communication* by type of special educational need (% SLTs)**

Improved:	Primary- speech	Primary- language	ASD	SpLD	MLD	SLD	PMLD
Social skills	13	38	66	19	52	56	41
Use of communication	18	53	74	61	63	90	71
Preverbal skills	6	19	38	32	41	56	71
Inference/verbal reasoning	6	26	30	32	30	15	18
Attention and listening	25	63	62	68	67	67	35
Parent-child interaction	14	36	44	48	44	51	59
Provision of means of communication	13	25	51	23	44	64	53
<i>n</i> =	104	193	51	31	27	39	17

**Table A.14 Outcomes targeted by interventions for *language* by type of primary special educational need (% SLTs)**

Improved:	Primary- speech	Primary- language	ASD	SpLD	MLD	SLD	PMLD
Understanding	14	87	62	47	85	56	29
Expressive language	21	89	54	71	85	56	18
Narrative skills	11	48	18	36	37	10	6
Extended vocabulary	15	79	31	55	78	41	6
Word finding	12	40	10	39	44	15	6
<i>n</i> =	104	193	51	31	27	39	17

**Table A.15 Outcomes targeted by interventions for *speech* by type of special educational need (% SLTs)**

Improved:	Primary- speech	Primary- language	ASD	SpLD	MLD	SLD	PMLD
Intelligibility	84	21	2	42	19	10	6
Phonological awareness or speech processing	69	15	0	42	11	10	6
Change in sound system	76	12	2	39	11	10	6
Consistency of speech production	8	12	2	39	19	13	6
Oro-motor skills	27	7	0	29	11	8	6
<i>n</i> =	104	193	51	31	27	39	17

**Table A.16 Outcomes targeted by interventions for *social skills* by type of primary special educational need (% SLTs)**

Improved:	Primary- speech	Primary- language	ASD	SpLD	MLD	SLD	PMLD
Confidence/self esteem	41	43	53	52	59	49	35
Independence	30	34	53	48	63	49	24
Behaviour	22	34	64	29	63	51	35
Relationships	22	31	56	42	59	41	35
Inclusion	29	32	48	45	56	44	29
<i>n</i> =	104	193	51	31	27	39	17

## APPENDIX 9 TEMPLATE FOR THE DESCRIPTION OF INTERVENTIONS

This template provides a description of the statements that are recommended to describe interventions, followed by a worked example. This kind of explanation of interventions amongst collaborators and with parents makes explicit the assumptions and helps transparency of plans. The template below is often standard practice for students emerging from education and training but becomes short circuited under the pressure of everyday practice.

### **Outcome:**

In order to be in a good position to be able to evaluate the impact of interventions, the starting point should be a clear statement of the intended outcome of the intervention. Findings from this study and that of the parents' preferred outcomes<sup>22</sup> suggest that a single outcome is unlikely to indicate the full impact. This statement should therefore consider: changes in the child's actual speech, language or communication skills as well as the functional outcome and its effect on the child's social interactions, preferably including either the child or parent perspective on the changes. Using the World Health Organisation concepts of 'impairment, activity and participation'<sup>23</sup> is a helpful guide here.

### **Technique or approach**

The next statement should indicate the techniques that will be used to bring about the change. Where this is part of a recognised and published approach, then it may be possible to use a shorthand phrase to indicate this. But caution is needed because not everyone has access to definitions of the various approaches; nor are they always used synonymously even in the literature.

### **Rationale or theory**

This next statement needs to show the underpinning link between the technique and the outcome, that is, a statement of the theory that suggests a technique will result in a particular change in the child's performance.

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<sup>22</sup> 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.

<sup>23</sup> World Health Organization (2001). *ICF: International classification of functioning, disability and health*. Geneva: World Health Organization

**Evidence**

This statement will include an indication of the source of the evidence supporting the theory of change.

**Delivery**

The delivery includes a statement of who will deliver the intervention, how frequently, and in what setting or context.

**Resources**

Finally, it is helpful to indicate what kinds of resources and materials can be used to support the intervention.

**Example:****Outcome:**

An increase in the child's stimulability for specified consonants

An increase in the range of consonants used by the child in speech

An increase in the child's intelligibility to parents

An increase in the child's interactions in class

**Technique/approach**

To expose the child to more examples of the target phonemes than would be experienced from everyday speech, that is, making a change to the child's auditory environment and might include increasing the saliency of sounds in words used with the child, increasing the frequency words using a target phoneme. This approach is included in the intervention known as 'focussed auditory input therapy'

**Rationale or theory**

The technique triggers the child's usual means of tuning in to their ambient sound system by increasing their sensitivity to the sounds.

**Evidence**

The particular techniques have not been evaluated as specific techniques but they are part of the intervention known as focused auditory input therapy which has a moderate level of evidence<sup>24</sup>

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<sup>24</sup> 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.

## APPENDIX 10. EXAMPLES OF OUTCOMES.

### Example outcomes for a child with communication difficulties

**Communication**

Initiates conversation with teacher

**Functional communication**

Asks for drinks and food

**Parent or child perspective**

Perceived reduction in frustration

**Social interaction**

Reduction in hitting other children

### Example outcomes for child with language difficulties

**Language**

Increased vocabulary in specified subject area

**Functional language**

Increased type:token ratio in subject discussion

**Parent or child perspective**

Completing homework in less time

**Social interaction**

Stays in subject class for longer periods

### **Example outcomes for a child with speech difficulties**

#### **Speech**

Percentage of consonants correct

Phonemic repertoire

Reduction in simplifications

#### **Functional speech**

Increased intelligibility

#### **Parent &/or child perspective**

Improved intelligibility

Fewer misunderstandings

#### **Social interaction**

Increase in confidence

Increase in number of questions in class

Increase in conversations with peers

### **Example outcomes for a child with difficulties**

#### **Fluency**

Percentage of syllables stammered

#### **Functional fluency**

Volunteering to answer questions in class

#### **Parent &/or child perspective**

Rating of severity

#### **Social interaction**

Maintaining eye contact in conversations

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