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Speech, Language and Communication Needs and Literacy Difficulties

I CAN Talk Series - Issue 1



Speech, Language and Communication Needs and Literacy Difficulties

Communication and Literacy

Communication is a critical tool for life. Almost every aspect of learning and socialising involves language. In developing effective language and communication, children learn to understand and talk about their needs, experiences, ideas and feelings. They also form firm foundations on which to base later literacy and academic achievement.

The focus of this report is the link between speech, language and communication needs (SLCN) and literacy development. However, as developing oral language skills is crucial as a foundation for written language, its content is relevant to all children.

It is estimated that as many as 10% of children and young people have some level of SLCN¹. Children with SLCN may have problems with production or comprehension of spoken language, with using or processing speech sounds, or with understanding and using language in social contexts. A growing number of studies show that a very significant proportion of language difficulties can be long-term².

The impact of SLCN is well documented in longitudinal studies. Without the right support, SLCN has been shown to affect academic achievement³, self-esteem, social acceptance⁴ and behavioural or emotional development^{5 6}.

There is also a very strong link between SLCN and literacy problems⁷. This relationship between oral language competence and the resulting transition to literacy is viewed as crucial in ensuring self-esteem, academic success and improved life chances⁸.

The Importance of Spoken Language Skills in Learning to Read and Spell

The role of oral language in supporting early literacy development is complex and differentiated⁹, however, it is universally acknowledged across disciplines that successful development of literacy depends upon competent language skills¹⁰. There is also no dispute about the impact of poor language skills on reading performance. In a landmark longitudinal study, Bishop and Adams¹¹ followed a cohort of pre-school children with language difficulties through to primary school. At age eight, they found that children whose language difficulties had been resolved by five and an half had developed good reading and spelling skills – in contrast to the group that had persistent SLCN.

This critical age is important given the results of studies which show a decline in the levels of children's oral language competence with which they start school¹², especially in areas of deprivation¹³. There is concern that many children approach the onset of literacy instruction with a shaky foundation on which to map written language skills¹⁴.

Decoding skills may develop mechanically for some, but an impoverished vocabulary and limited understanding of language make it difficult for children to make sense of what they read¹⁵. The implications of this are clear: during the pre-school period and early schooling children should receive experiences that enrich their vocabulary and conceptual knowledge.

¹ Law et al (2000) *Provision for children's speech and language needs in England and Wales: facilitating communication between education and health services* DfES research report 239

² Stothard, S.E., Snowling, M.J., Bishop, D.V.M., Chipchase, B.B. and Kaplan, C.A. (1998) Language Impaired Pre-Schoolers: a follow up into adolescence *JSLHR* 41

³ Snowling, M.J., Adams, J.W., Bishop, D.V.M. and Stothard, S.E (2001) Educational Attainments of School Leavers with a Pre-school History of Speech-Language Impairments *IJLCD* 36

⁴ Botting, N. and Conti-Ramsden, G. (2000) Social and Behavioural Difficulties in Children with Language Impairment *CLTT* 16

⁵ Silva, P., Williams, S. & McGee, R. (1987): A longitudinal study of children with development language delay at age 3 years; later intellectual, reading and behaviour problems *Developmental Medicine & Child Neurology* 29, 630-640

⁶ Law, J. and Garrett, Z. (2003) Speech and language Therapy: Its potential role in CAMHS *Child and Adolescent Mental Health* 2

⁷ Snowling, M.J. and Stackhouse J. (Eds) (1996) *Dyslexia Speech and Language* London: Whurr Publishers Ltd

⁸ Snow, P.C. and Powell, M.B. (2004) Developmental Language Disorders and Adolescent Risk: A Public-health Advocacy Role for Speech Pathologists? *Advances in Speech Language Pathology*, 6 (4) 221-229

⁹ Griffin, T.M., Hemphill, L. Camp, L. and Palmer Wolf D. (2004) Oral Discourse in the pre-school years and later literacy skills *First Language* 24 123-147

¹⁰ Palmer, S. (2004) *Literacy Today* No 38

¹¹ Bishop, D.V.M. and Adams (1990) A Prospective Study of the Relationship Between Specific Language Impairment, Phonological Disorders and Reading Retardation *Journal of Child Psychology and Psychiatry* 31

¹² Basic Skills Agency (2002): Summary Report of Survey into Young Children's Skills on Entry to Education

¹³ Locke A., Ginsborg, J. and Peers I. (2002) Development and Disadvantage: Implications for Early Years *IJLCD* Vol. 27 No 1

¹⁴ Stackhouse, J. (1989) Relationships between spoken and written disorders in Mogford, K. and Sadler, J. (eds) *Child Language and Disability - Implications in an educational setting* Philadelphia: Multilingual Matters

¹⁵ Whitehurst, G.J. and Fischel, J.E. (2000) Reading and language impairments in conditions of poverty in Bishop, D.V.M. and Leonard, L.B. (eds) *Speech and Language Impairments in Children: Causes, Characteristics, Intervention and Outcome* Psychology Press

SLCN and Literacy: The Link

Almost all children with SLCN have difficulty with some aspect of learning to read and write. As these children are not a homogenous group and literacy is multi-faceted, difficulties are also various; they may be with decoding print, reading comprehension, spelling or expressive writing¹⁶. The type of literacy difficulty experienced will depend on the profile of the individual child.

Most models of reading¹⁷ describe learning to read as the interaction between developing systems for mapping between printed words (orthography), spoken words (phonology) and word meanings (semantics). It is this interaction which is helpful in explaining the range of ways in which speech and language difficulties can result in difficulty with reading.

Children with phonological (speech sound) difficulties often have associated literacy problems

In decoding print, children need to link phonemes to graphemes, to segment, blend and manipulate sounds¹⁸. It is these aspects of reading which are problematic for children with phonological difficulties. Much research has been focused on establishing the similarities between language impairment and dyslexia¹⁹. Phonological difficulties are present in both conditions, and research identifies that written and spoken language difficulties both stem from difficulties in the underlying speech processing system²⁰.

There is evidence that although many children with developmental spoken phonological difficulties may go on to have no difficulty with learning to read and spell, the same isn't true for children who have persistent complex disordered speech patterns. Even if the difficulties are seemingly resolved, these children can go on to have difficulty with literacy development because of a continuing underlying phonological processing deficit. Research shows conclusively that many of the difficulties of poor readers relate to deficiencies in phonological awareness²¹. Stackhouse²² identified, through case studies, a complex

relationship between spoken phonology and phonological awareness – she, too, identified phonological awareness as a vital foundation skill in learning to read and spell. Others point out the importance of phonological memory, the ability to hold sounds in a specialised short-term memory over brief intervals²³. In children with phonological difficulties, problems acquiring the necessary fluency and automaticity in decoding sounds and identifying words will impact on comprehension as less attention can be directed to focusing on word meaning²⁴.

Children with syntactic (sentence structure), semantic (word meaning) or pragmatic language difficulties may have difficulties in decoding words and in reading comprehension

Knowledge of word meaning, sentence and narrative structure also helps in decoding. This means that literacy acquisition will be affected for children who have problems with syntax, semantics or discourse. Children with impoverished vocabulary are less likely to be able to use their word knowledge in reading irregularly spelt words²⁵, weak grammatical skills may limit a child's ability to use sentence context to read unfamiliar words²⁶. In children with word retrieval problems establishing the automaticity needed for decoding, particularly when reading aloud, can be problematic even though their sound system is intact²⁷.

Children who are unable to understand complex oral language and word meanings are likely to have poor reading comprehension²⁸ and those who find it difficult to make inferences will find making sense of extended written text difficult²⁹.

Children with pragmatic language difficulties, and notably those on the autistic spectrum, can present as hyperlexic – having excellent decoding skills, but showing limited understanding of what they have read³⁰. Through bypassing the semantic component of reading, they tend not to modify their reading, to self-correct or extract meaning from the context of what they read³¹.

¹⁶ Stackhouse, J. and Wells, B. (1997) *Children's Speech and Literacy Difficulties: A psycholinguistic Framework* Whurr

¹⁷ e.g. Plaut, Siedenberg, McClelland and Paterson

¹⁸ Nation, K. & Hulme, C. (1997) Phonemic segmentation, not onset-rime segmentation, predicts early reading and spelling skills *Reading Research Quarterly* 32, 154-167

¹⁹ Bishop, D.V.M. and Snowling, M. (2004) Developmental Dyslexia and Specific Language Impairment: Same or Different? *Psychological Bulletin* Vol. 130

²⁰ Stackhouse, J. (2000) Barriers to Literacy Development in Children with Speech and Language Difficulties in Bishop, D.V.M. and Leonard (eds) *Speech and Language Impairments in Children: Causes, Characteristics, Intervention and Outcome* Psychology Press

²¹ Catts, H. (1989) Phonological Processing Deficits and Reading Disabilities in A. Kamhi and H. Catts (eds) *Reading Disabilities: A Developmental Language Perspective* Boston Allyn and Bacon

²² Stackhouse (2000) *ibid*

²³ Bishop, D.V.M. and Snowling, M. (2004) *ibid*

²⁴ Smith, C.R. (1991) *Learning Disabilities: The Interaction of Learner, Task and Setting* Boston Allyn and Bacon

²⁵ Nation, K. and Snowling, M. (1998) Individual Difference in Contextual Facilitation: Evidence from dyslexia and poor reading comprehension *Child Development* 69

²⁶ Nation, K. and Snowling, M. (1998) *ibid*

²⁷ Smith, C.R. (1991) *ibid*

²⁸ Perera, K. (1984) *Children's Writing and Reading* Oxford England Blackwell

²⁹ Bishop, D.V.M. and Snowling, M. (2004) *ibid*

³⁰ Frith, U. and Snowling, M. (1983) Reading for Meaning and Reading for Sound in Autistic and Dyslexic Children *British Journal of Developmental Psychology* 1

³¹ Happe, F.G.E. (1997) Central Coherence and Theory of Mind in Autism: Reading homographs in Context *British Journal of Developmental Psychology* 15

Speech, Language and Communication Needs and Literacy Difficulties

A further converse relationship between language and literacy development is that weak literacy skills may impact on learning, on the later growth of vocabulary and / or conceptual understanding. Children who read well and more extensively acquire more knowledge in numerous domains as they have more exposure to complex vocabulary and sentence structure³².

Very often, children with dyslexia who have a phonological deficit use their semantic and syntactic skills to help them read³³. However, this compensatory resource is not available to children with both phonological and syntactic / semantic difficulties, so reading difficulties may be more marked. Relying on one route to reading, either phonological or semantic / syntactic, can mean that a child's literacy profile changes over time as some skills become stronger and others less used³⁴.

Children with syntactic or semantic difficulties may have problems understanding or producing written text

Children with SLCN, especially those with syntactic or semantic difficulties often have associated difficulties with written language such as poor organisation, shorter sentences and limited vocabulary use³⁵. Interestingly, they sometimes find the mechanical, less linguistically demanding aspects such as punctuation and capitalisation easier.

In oral communication, any weakness in understanding, the use of grammatical structures or word knowledge can be compensated to some extent by gesture and situation. Verbal or non-verbal feedback provided by the listener indicates where there is any potential breakdown in message transmission. However, this is not the case with written language; here this feedback is not available. In addition, written language differs stylistically and requires the reader / writer to understand / use complex grammatical structures such as embedded clauses,

coordination and subordination. The message has to be much more explicit and less ambiguous³⁶. Without constant exposure to more formal types of written language and explicit teaching in the areas of weakness, expressive writing will prove challenging to all children with SLCN, even those without phonological level problems who have little difficulty with spelling.

Routes to Building Successful Communication as a Basis for Literacy

Developing early language skills

Learning to read and write starts at home and is an ongoing process throughout a child's schooling. The link between supportive parental involvement and early literacy development in children has been well established, and much research shows that children who are from homes where parents model the uses of literacy and engage children in activities that promote basic understanding about literacy are better prepared for school overall³⁷. Initiatives such as Talk to Your Baby³⁸, and Bookstart³⁹ have raised the profile of communication at home, but the role of the family continues to be important as children move through school, so that reading is made as functional as possible. I CAN's *Early Talk*⁴⁰ emphasises this bridge between school and home; families have a vital and continuing role in developing the early language skills crucial for the development of literacy⁴¹.

As longitudinal studies show that language continues to be associated with good literacy outcome throughout schooling⁴², a focus on the development of children's communication is vital. The emphasis on oral language and literacy in the Foundation Stage⁴³, the National Literacy Strategy⁴⁴, Department for Education and Skills (DfES) speaking and listening guidance⁴⁵, and in the Key Stage 3 Strategy⁴⁶ is appropriate and welcome, but evidence shows that despite some examples of good practice this is by no means universal⁴⁷.

³² Whitehurst, G.J. and Fischel, J.E. (2000) Reading and language impairments in conditions of poverty in Bishop, D.V.M. and Leonard, L.B. (eds) *Speech and Language Impairments in Children: Causes, Characteristics, Intervention and Outcome* Psychology Press

³³ Snowling, M.J., Gallagher, N. and Frith, U. (2003) Family Risk of Dyslexia is Continuous: Individual differences in the precursors of reading skill *Child Development* 74

³⁴ Bishop, D.V.M. and Snowling, M.J. (2004) *ibid*

³⁵ Lewis, B. (1998) Spoken Language and Written Expression - interplays of delays *American Journal of Speech-Language Pathology*

³⁶ Wallach, G.P. & Butler, K.G. (1994) *Creating Communication, Literacy and Academic Success in Language Learning Disabilities on School-Age Children and Adolescents* Macmillan p5

³⁷ Dewey, J. (2004) *Learning About Literacy* www.reading.org

³⁸ www.literacytrust.org/talktoyoubaby

³⁹ www.bookstart.co.uk

⁴⁰ Law, J. Dockrell, J. Willimas, W. and Seeff, B. (2001) *The I CAN Early Years Evaluation* Project City University and Institute of Education

⁴¹ Chaney (2000) Social class does not predict reading success, but language and metalinguistic skills do in Perkins, M.R. and Howard, S.J. (eds) *New Directions in Language Development and Disorders* New York: Kluwer/Plenum

⁴² Stothard, S.E., Snowling, M.J., Bishop, D.V.M. and Chipchase, B.C. (1998) Language impaired pre-schoolers: A follow up into adolescence *Journal of Speech, Language and Hearing Research* Vol. 14

⁴³ DfES (2000) *Curriculum Guidance for the Foundation Stage*

⁴⁴ DfES (1998) *NLS Framework for Teaching*

⁴⁵ DfES (2003) *Speaking, Listening and Learning*

⁴⁶ DfES (2001) *Key Stage 3 National Strategy*

⁴⁷ Ofsted *The Primary National Strategy: an evaluation of its impact in primary schools* 2004/5

A multi-faceted approach to intervention to support children's communication needs

The focus in the National Literacy Strategy⁴⁸ on an approach which combines phonic, whole word and literature-based instruction seems set to change through the Rose Report with the introduction of synthetic phonics as a universal approach. This approach, as described in the report, emphasises the importance of grapheme to phoneme correspondence, phoneme segmentation, blending and phoneme manipulation but also recognises the importance of exposure to real books.

Phonological awareness training based on the components of synthetic phonics, but often involving a focus on earlier developmental stages or other levels of segmentation, has been shown to improve literacy skills for both typically developing children⁴⁹ and those with a language disorder⁵⁰. Others have found that for children with SLCN phonological awareness training alone is less effective than when other approaches are built in as a support: explicit linking to the written word⁵¹, developing metalinguistic awareness through error feedback and teaching overt rules⁵², colour coding sounds, linking sounds to movements or actions⁵³.

For many children synthetic phonics as part of a carefully designed, multi-sensory programme should result in a successful experience of learning to read. However, as shown above, children with SLCN may well have difficulties that affect both phonological and semantic / syntactic routes to reading and spelling. They present with complex profiles which often change over time.

The importance of phonological skills for decoding should not be underestimated; if these skills are not developed in children with SLCN their ability to move beyond a whole word approach is restricted. However, a uni-dimensional approach to intervention may mean a reduced range of strategies which the child can draw on as necessary. Not all children respond to intervention aimed at developing phonological skills. Programmes that disregard verbal skills

beyond phonology run the risk of neglecting fundamental language skills that are needed for both decoding and text comprehension⁵⁴.

Practice and research highlights the need in children with SLCN for an individually tailored, integrated approach based on researched evidence which addresses their specific phonological, syntactical and semantic profile. Suggested approaches are listed in the appendix to this report. Selecting interventions from this range, following careful assessment, means that reading programmes are individualised, targeting children's specific needs.

Workforce development

Perhaps the most obvious environmental influence on children's reading acquisition is the teaching and educational experiences they receive⁵⁵. Teachers need to be able to create an environment which supports both literacy and communication development of all children across the phases of education.

Studies show that although teachers are often aware of the importance of communication and concerned about levels of children's language⁵⁶, many express anxiety and lack of knowledge in their ability to support them. A recent investigation into levels of teacher knowledge about communication development and SLCN showed that over 60% lacked confidence in their ability to meet children's needs⁵⁷.

Research carried out for the DfES⁵⁸ identifies the limited and variable skills and resources in identifying and supporting SLCN as a major reason for ineffective provision for these children.

Children's communication development as part of the Common Core of Skills, Knowledge and Competence for the Children's Workforce⁵⁹ would embed this critical area into national standards. This would put emphasis on the need for all professionals within the children's workforce to create opportunities to foster children's spoken language and lay the foundations for successful literacy learning.

⁴⁸ DfES (1998) *NLS Framework for Teaching*

⁴⁹ Lundberg, I., Olofsson, A. and Petersen, O.P. (1988) Effects of an extensive program for stimulating phonological awareness in pre-school children *Reading Research Quarterly* 23

⁵⁰ Van Kleek, A., Gillam, R.B. and McFadden, T.U. (1998) A study of classroom-based phonological awareness training for pre-schoolers with speech and/or language disorders *American Journal of Speech-Language Pathology*

⁵¹ Hatcher, P.J., Hulme, C. & Snowling, M.J. (2004) Explicit phoneme training combined with phonic reading instruction helps young children at risk of reading failure *Journal of Child Psychology and Psychiatry* vol. 45,

⁵² McGuinness, G. and McGuinness, C. *Phonographix* Read America

⁵³ Clare, J. (1998) *Jolly Phonics*

⁵⁴ Denne, M., Langdown, N., Pring, T. and Roy, P. (2005) Treating Children with Expressive Phonological Disorders: Does Phonological Awareness Therapy Work in the Clinic *IJLCD* Vol. 40

⁵⁵ Bishop, D.V.M and Snowling, M.J. (2004) *ibid*

⁵⁶ Locke, A., Ginsborg, J. and Peers, I. (2002) Development and Disadvantage: Implications for the Early Years *IJLCD* 2002 Vol. 27 No 1

⁵⁷ Sadler, J. (2005) Knowledge, attitudes and beliefs of the mainstream teachers of children with a pre-school diagnosis of speech/language impairment *Child Language Teaching and Therapy* Vol. 21 Number 2

⁵⁸ Law et al. 2000: Provision for Children with Speech and Language Needs in England and Wales DfEE Research

⁵⁹ *Every Child Matters (2003): Change for Children*

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Research

There is a large body of research focusing on the link between SLCN and literacy problems, and a developing awareness of effective interventions for this group of children. However, there is a need to build on this evidence base to investigate areas such as length of intervention, the roles of different professionals and the effectiveness of synthetic phonics-type intervention programmes for all children with SLCN regardless of their phonological skills. It is important also to question whether children with SLCN go through the same stages of phonological development as typically developing children.

With the current emphasis on workforce reform and development, investigation into effective adult training programmes is also vital.

Summary

There is a clear link between communication and literacy development – and a very specific relationship between SLCN and literacy problems.

A focus on developing children's oral language skills throughout their schooling is imperative. Based on research investigating this relationship, there is a range of appropriate intervention approaches that can be adopted including:

- increasing the focus on the development of early language skills
- a multi-faceted approach to intervention to support children's communication needs

- developing the children's workforce to improve their understanding of children's communication development, to develop their range of tactics to support effective communication for all children and to support their work with children with a potential SLCN
- continuing research in this area to develop effective interventions and training programmes.

Appendix

A selection of approaches to communication development

The following approaches can be used as part of an individually tailored, integrated approach to supporting literacy development in a child with SLCN. Selecting interventions from this range, following careful assessment, means that reading programmes are individualised, targeting children's specific needs.

- Generalised phonological awareness programmes before more focused phonics such as the Salley programme⁶⁰, or POPAT⁶¹
- Structured programmes which teach phonemes linked to visual support helping to support the internal representation of sound: letter patterns^{62 63}
- The use of symbol support such as Rebus or PCS, and supportive writing software which use them such as Clicker programmes, Writing with Symbols

⁶⁰ McQueen and Hurd *Structured Activities for Language and Literacy in the Early Years* Questions Publishing

⁶¹ Popat, P., Roche, P. and Jenkins, G.A. *Programme of Phonemic Awareness Training*

⁶² Snowling, M., Goulandris, N. and Defty, N. (1996) A Longitudinal Study of Reading Development in Dyslexic Children *Journal of Educational Psychology* 88

⁶³ Letterland

- Other visual / multi-sensory support systems linked very closely to elements of language at sound, word and sentence level:
 - Cued articulation⁶⁴, showing the breakdown of sounds
 - Paget Gorman Signed Speech⁶⁵, showing grammatical markers visually
 - Language through Reading using colour-coding to show sentence structure
- Phoneme segmentation, manipulation and blending taught alongside evaluative and appreciative skills where a child has difficulty in language comprehension so that the child becomes a functional reader and not just a decoder. Strategies for text comprehension include sentence charts, highlighting, key words, Language Through Reading⁶⁶
- Colour-coding of consonants and vowels
- Specific teaching and paced introduction of technical words and concepts associated with reading such as 'sound', 'letter', 'first', 'last' in meaningful ways, in line with a pupil's comprehension and vocabulary
- Programmes which include the introduction of controlled core vocabulary and syntax at a whole word level in advance of phonic skills for those children who have very specific phonological difficulties
- An alternative to a phonic approach such as whole word and semantic groupings, visual mnemonics, signing, colour coding (Remedial Syntax, Spotlights⁶⁷) for some children.

I CAN Talk Series

I CAN Talk is a series of papers exploring contemporary issues in children's speech, language and communication. *I CAN Talk* reports review current research and literature and offer practical evidence-based solutions to inform debate on speech and language and to support practitioners, parents and policy makers.

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I CAN Talk Language and Social Exclusion Issue 4

I CAN Talk Speech, Language and Communication and the Children's Workforce (I CAN / The Communication Trust) Issue 5

I CAN Talk Speech, Language and Communication Needs and Primary School-aged Children Issue 6

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⁶⁴ Passey, J. *Cued Articulation* Stass Publications

⁶⁵ *Paget Gorman Signed Speech* Stass Publications

⁶⁶ *Language Through Reading* I CAN

⁶⁷ Kaldor, C., Tanner, J. and Robinson, P. (2001) Turning on the spotlight *Speech and Language Therapy in Practice* Avril Nicoll

