



# The importance of oral language and its implications for early years practice:

## A report to Goodstart Early Learning

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## Executive summary

There is burgeoning scientific support for the social, emotional and economic return for proper investment in early child education. Given its important role in the child's development it is clear that promoting children's language development is central to this argument. Optimising language "health" through what parents and early educators do, pays significant individual and collective dividends. And in the context of those who "share" these early learners, creating the conditions for optimising language development also provides an opportunity to identify challenges to this development through observation and measuring the right language outcomes. This report looks at the role played by early language development and at what can be done to maximise language outcomes. It includes a series of Question Sets designed to trigger conversations about the further development of Goodstart in providing environments conducive to enabling language progress and the identification and support for children with language and communication difficulties.

There have been a number of convergent initiatives in recent years suggesting an increasing policy interest in early development in general and in language delay in particular. As a result of these and particularly following the Bercow Report into services for children with speech, language and communication needs in the UK, The Communication Trust, an umbrella group of national charities has been set up to promote the importance of language development, to provide relevant materials for practitioners and parents and to lobby for better services for children with language delays and other children with speech and language needs. Also arising from this report the Better Communication Research Programme published a series of research reports in December 2012 to help underpin the future development of services for these children. There have been campaigns to encourage a focus on communication skills organised by The Communication Trust (The Hello Campaign) and the Royal College of Speech and Language Therapists (The Giving Voice Campaign).. The Healthy Child Programme in England and comparable initiatives in Northern Ireland, Scotland and Wales and, of course, Australia, include reference to the identification of early language delays. There have also been a number of initiatives to raise the profile of oral language development in the early years and primary school curriculum.. While such initiatives are welcome, sustainable changes to attitudes and practice are the key measures of success.

We can agree on a number of general principles with regard to early child development and these can reasonably be supplemented by some more specific principles relevant to language development.

### General principles

- Principle 1: Each of us is the product of an on-going interaction between the influence of our personal life experiences and the contribution of our unique genetic endowment, within the culture in which we live.
- Principle 2: Human relationships are the "active ingredients" of environmental impact on young children.
- Principle 3: The development of intelligence, language, emotions, and social skills is highly inter-related.
- Principle 4: Early childhood interventions can shift the odds toward more favourable outcomes, but programs that work are rarely simple, inexpensive, or easy to implement.

The key to the understanding in this report is that all policy should be developed from the research evidence, that it should emphasise the whole child, their family and their community and that there should be an emphasis on emotional well-being in addition to early cognitive skills. At one level such principles are non-contentious but how they play out in a policy context depends on the nature of that context. It is relevant that similar messages are being developed in the UK where we have seen a series of reports over recent years, emphasising the need to address early cognitive differences in the

context of the family. To these messages we would add a series of supplementary principles that specifically relate to language development.

### Language specific principles

- Principle 5: Communication is key to the fostering of life chances in early childhood. Everyone in the child's environment has a role to play in fostering the child's communication skills. This starts at birth and includes immediate and extended family and potentially a wide range of professionals, health visitors, speech and language therapists, early educators, teachers, psychologists etc.;
- Principle 6: The importance of early communication skills and their implications for the child's social and educational development across the early years and beyond need to be understood by all parents;
- Principle 7: All professionals need to be aware of how to support the development of language and identify early language delays and confident in knowing what they can do to enhance language skills;
- Principle 8: We need to scale up and roll out interventions that have been shown to work and test their value across whole populations and over an appropriate length of time;
- Principle 9: We need to sustain the pressure on policy makers to improve services for the child who is language delayed, especially in the very early years (i.e. before three years).

### NEXT STEPS

- After forty years of research a great deal is known about what needs to be done to promote language development in children;
- Much of what can be done to promote children's early skills is not exclusive to language but a focus on language, given its importance to modern society in terms of school achievement and employability, is important for any intervention programme;
- There is a need to make sure that all professionals are aware of what is needed and that their input be monitored through the most appropriate means available;
- Parents, teachers and specialists need to be actively involved in subsequent developments.
- The picture is muddled by the fact that many children who are late talkers go on to have reasonable language skills. More is needed about the developmental paths that children follow and what it is about some children that makes them more resilient than others. Nevertheless it is clear that there is a risk of later difficulties for which society needs to take a responsibility;
- In the current economic climate, services will only develop if they are underpinned by a strong evidence base. Any steps to develop intervention need to be supported by effectiveness research built into the design of the intervention not bolted on after the intervention has been started as is too often the case in government policy;
- While it is relevant to develop interventions at any age given the genetic evidence and the evidence about the role of specific environment features that make a difference to language development in the first three years of life there is a strong case for developing and robustly evaluating interventions targeting early language before the age of three years;
- One of the features of such an intervention should be the involvement of different agencies and professional groups with an interest in these children. Community support pathways need to be available to support both parents and early learning environments. There is a potentially strong role for the charitable sector to take a lead in catalysing this type of activity;
- There is much to be learned from the Sure Start experience in the UK both in terms of the specificity of the interventions and in terms of the way that the interventions were evaluated;
- While clinic and school based interventions are important, the role of the family and neighbourhood are central to developing interventions for young children.

## 1. Why is language development important in the early years?

Language development is important in its own right because it affects the child's experiences at home and at school. We watch with amazement as two year olds start to master their language skills and we marvel at their capacity to let people know what they mean, to share a joke etc. To some extent this process appears to be biologically driven and it has even been called an instinct<sup>1</sup> yet anyone who has watched their child mimic those around them, copying words, phrases and intonation will know that the context in which they start speaking is very important. Children acquire language under widely differing circumstances, and a number of factors have been shown to be associated with language development. It is widely reported in the literature that the child's environment is associated with language development, however this is not the whole story as heredity, and other factors also play a part.

Language development is important because it is language which introduces the child to the social world, to the formation of relationships and to the capacity to interact with others and, of course, to learn. And this is occurring in the changing context of the modern workforce where the nature of employment has fundamentally changed over recent years. As Hart and Risley<sup>2</sup>, two of the most outstanding researchers in the field have said, language is key to the development of symbolic thought and "The economic importance of intellectual, symbolic and problem solving work has increased (over recent years) and that of blue and white collar work has decreased." The more sophisticated, the better educated and the more automated, or digitalised the society becomes, the greater this shift from blue collar manual employment towards white collar "communication focused" jobs, something which creates particular challenges for the less advantaged, particularly in times of economic downturn. This makes it difficult for a young person lacking in communication skills to break into and progress within the job market <sup>3</sup>:

*The shepherds, seamstresses, plowmen, and spinners of the past did not require optimal communication skills to be productive members of their society, as they primarily depended on their manual abilities. Today a fine high-school athlete—a great "physical specimen"—who has no job and suffers from poor communication skills is not unemployed, but, for the most part, unemployable. On the other hand, a paraplegic in a wheel chair with good communication skills can earn a good living and add to the wealth of the society. For now and into the 21st century, the paraplegic is more "fit" than the athlete with communication deficits. (Ruben, p. 243)*

Acknowledgement of the significance of communication competence is also reflected in the recently released Industry Skills Council of Australia Report *No More Excuses* <sup>4</sup> in which Australian Federal Member of Parliament John Dawkins states "There is undeniable evidence to demonstrate that poor communication skills adversely affect productivity in the workplace and productivity suffers, as does our global competitiveness" (p. 3).

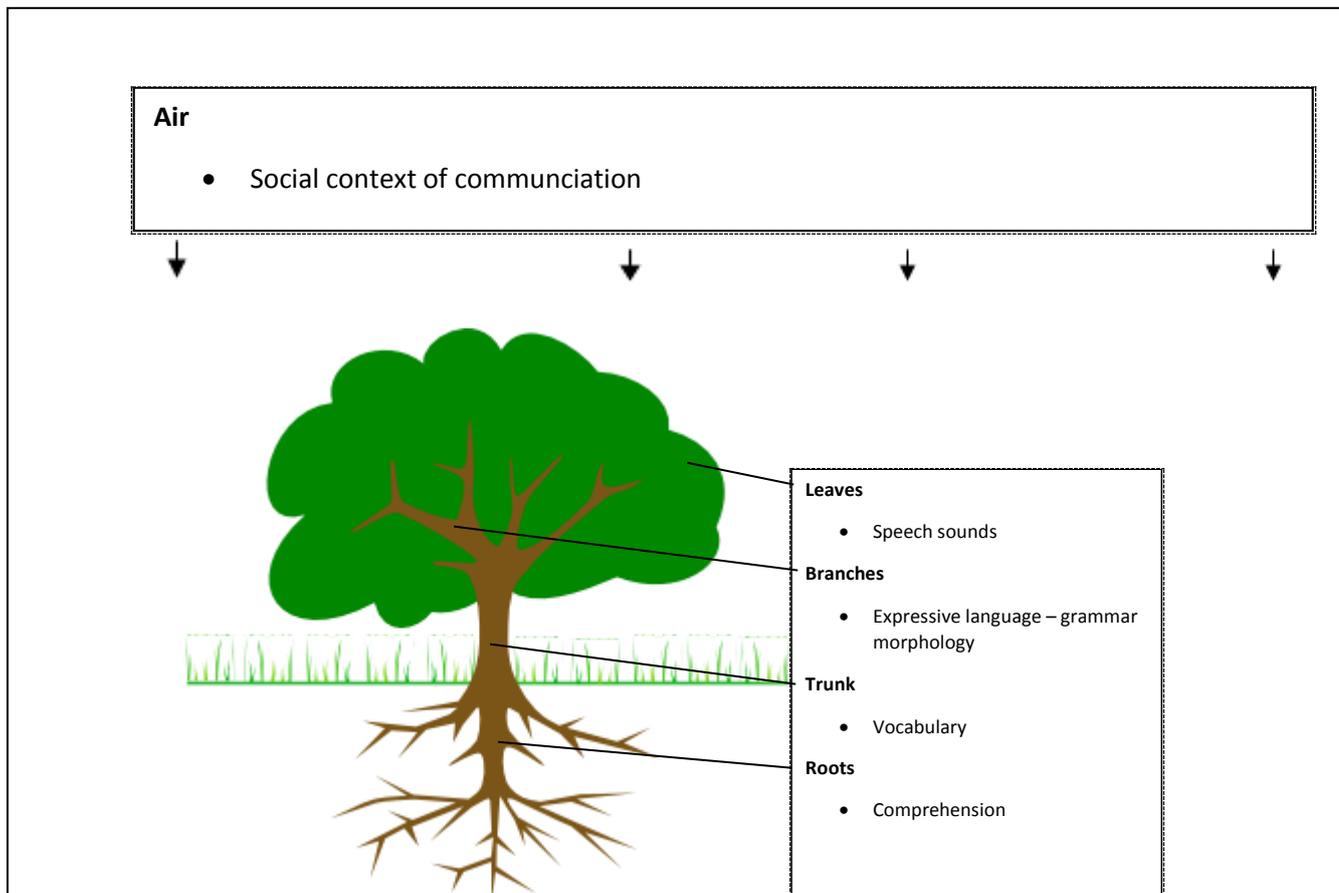
Early child development, and language development in particular, are now recognised to have an impact across the life course

*"Thus, the social environment is a fundamental determinant of early child development and, in turn, is a determinant of health, well-being and learning skills across the balance of the life course." (p.627)*

Clearly child development goes beyond language development but the child's capacity to use language effectively is a key feature of that development.

## 2. What does optimal language development look like?

Language development is not one thing and so it is commonly separated out into its constituent parts. One of the first distinctions is expression and comprehension or receptive language. The former is made up initially of verbal and non-verbal expression (gesturing, turn taking, body language etc.). Verbal expression comprises the words that a child uses but also the grammar that starts to emerge around two years as the child starts to put words together. Here we also include the way that the child learns to modify words to change their meaning known as morphology, adding endings to verbs to change their tenses, adding plural “s” in English to indicate number. Expression clearly involves the child’s speech, their ability to articulate words clearly but also to make sure that they know the sound rules for their specific language. Speech is sometimes seen as the most important aspect of communication because it is so obvious to the listener but it is only a fraction of what we understand by communication. Most languages follow the same patterns but there are some differences. Although most of these skills have been acquired by the time the child reaches school they continue to develop over the subsequent years. Vocabulary clearly increases but also the ability of the child to convey their ideas clearly. Alongside the more obvious aspects of speech and language they develop the child’s social interaction or pragmatic skills. These need not be language based as such but they play a critical role in the way that the child interacts with others. Central to this is the child’s capacity to interpret what the person speaking with them means. Initially this can be about word meaning but it always includes what the child expresses what they mean. A child who sits down extends their hand and says “bikky” is clearly giving a much more complicated message than labelling a biscuit. The analogy of a tree is helpful to see how these elements interrelate



Comprehension is the root, underpinning all expressive language. If the child understands what others are saying they are more likely to be able to use those expressions themselves. But understanding can be difficult to assess. If a father says to his three year old, leaving the house "Put your hat, coat, gloves, and boots on we are going to the shops", does the child have to understand each of these words? The answer is that it depends on the context but it is quite likely that the routine is familiar and he may be watching his father doing the same things and copy him without fully understanding the request. The social context is the air surrounding the tree that effects how all aspects fo communication and language development function. Children's lives are commonly full of routines which allow them to anticipate meaning in this way. Most children gain these skills gradually over the first few years but it is not uncommon to see children in the early years classroom desparately watching their peers to find out what the teacher has said. Of course, the same goes for social communication. It is essential to understand what the parent or early years worker means. It is not enough to just hear to words. Most adults with small children will specifically attempt to make this easier by slowing down what they say, repeating words and phrases and making sure that the child keeps up. But in the early years classroom this can be difficult as the majority of children's comprehension skills accelerate and there is less time for faciliating a child's comprehension. Later on in primary school this need to understand the context is paramount. Teachers use ever more complicated language and the child may struggle to understand what they mean. Think of common expressions such as "It's raining cats and dogs". The words themsevles do not allow you to understand that the speaker is trying to say. Consider too the importance of context in the classroom. The teachers says "the window's open" meaning "Can you go and close it?" but the child has to infer what is intended. And, of course, this sort of skill is critical for a child wanting to understand the ever more sophisticated social langauge of his peers.

Language development is linked into many other aspects of the child's development and we want to see the child acquiring the full range of different skills and integrating them as they develop so that they are "ready" for whatever they need to do at whatever stage of development they may be at. This would include readiness for nursery, primary school, secondary school and the workplace, ready to make and keep friends, able to communciate effectively with their familiy, early educators and later teachers, ready to learn to read and then to read to learn. While abilities will always differ between one child and another we need them to reach a threshold so that they are ready to move on as necessary. It is important to stress that for most children this process is relatively straight forward. They receive enough of the right sort of stimulation from those in their environment to understand and say what they need to say, but some children are less able to take opportunities for themselves and this is where organisation such as Goodstart come in.

Professionals are often asked about the role that bilingualism plays in affceting the rate of language development. It is a subject where it is very diofficult to make generalisations because the circumstances in which the child is growing up is almost certainly more important that the fact that they speak two or more languages. Bilingualism and commonly multilingualism is the norm in most societies and there is absolutley no evidence that there are long term negative consequences of having another language. In fact the opposite is probably true from both an educational and an economic perspective. There is some evidnce that if you are blingual it is an advantage in learning to read, awareness about difference sounds enhancing your capacity to decode language. Similarly being bilingual confers distinct economic asvanategs in many circumstances.

### **3. How best to assess language development?**

A variety of methods are used to assess language and communciations skills. First and foremost are good observational skills, identifying what the child is really saying and how they are communicating with their peers. Central to this is a good understanding about child development in general and

language development in particular. There are variety of observational checklists to help such observations, both for home and classroom use. The next stage are informal assessments whereby the adult tries to elicit specific behaviours from the child, for example “Can she understand this word or sentence?”. Commonly considered most valid and reliable are measures which have been developed by researchers to ensure that the way the questions are asked is the same whenever the test is used and the results are written down and compared with the performance of large groups of other children. These formal or “standardised” tests are commonly considered to be the “gold standard” of assessment but they usually have to be carried out by specific trained professionals and are not routinely used in most early years settings. It is likely that a combination of parental report and a close observation in the early years setting will be the most effect way of assessing the child langauge and communciation skills.

Formal tests can also be difficult to use with very young children or with some children who have learning difficulties. In such cases care has to be taken that a child’s reluctance to perform a specific task may not necessarily be an indication that they are not able to carry it out. In practice the most effective measures for early years educators in Goodstart programmes are standardised questionnaires and observational scales that are used and discussed at regular intervals with other staff and with parents. Where possible there shoud be access to speech and language pathologiosts and psychologists to discuss specific children who warrant additional concern. The evidence suggests that continual monitoring rather than one-off screening procedures is a much better way of keeping in touch with the needs of individual children.

#### **4. How does language development affect later development?**

##### ***School readiness***

It is well established that learning to read builds upon oral language skills. Language and phonological skills are the foundations of literacy development <sup>5</sup>. Children with poor comprehension are often characterized as having a hidden difficulty because they decode well and, on the surface, are fluent readers. It is only when they are asked questions about what they have read that their difficulties are revealed This emphasizes the importance of language as a precursor to subsequent literacy and academic achievement. It is important to foster the development of oral language skills as a foundation for literacy development .

One of the most important measures of early attainment is “school readiness”. School readiness includes the readiness of the individual child, the school’s readiness for children, and the ability of the family and community to support optimal early child development. An individual’s school readiness is determined largely by the environment in which they live and grow <sup>6</sup>. Some children experience marked increases and decreases in ability relative to their peers in the pre-school years and it is hard to identify who will go on to have language impairment<sup>7</sup>. Facilitating the smooth transition between home and school, including cultural sensitivity and striving for continuity between early care and education programs and later schooling can help ensure a child’s readiness for school. We also need to be careful to acknowledge that language skills are a key element in most measures of school readiness which inevitably increases the likelihood that early language skills and school readiness will be related. Nonetheless there is evidence that language competence is critical scaffolding for readiness to learn <sup>8</sup> as well-developed communication and word skills are fundamental to a good start in the early years at school <sup>9</sup>.

##### ***Adult outcomes***

A number of studies have attempted to look at the long term implications of early language development and these broadly fall into two types, those that have followed up a group of children who had been in receipt of services because they had been identified as having developmental

language impairment and those that have examined a large cohort of children across time irrespective of their service use but whose early performance was known. But approaches suggest that weaker language skills put the child at risk of later difficulties. The study with the longest span comes from the UK's 1970 British Cohort Study (BCS70), one of Britain's richest research resources for the study of 17,196 persons living in Great Britain who were born in one week in 1970 of whom two groups were identified as having delayed vocabulary development at five years of age<sup>10</sup>. Two groups of children with difficulties those with and without non-verbal difficulties were compared to those whose vocabulary was within the expected range at school entry on three domains at thirty four years namely literacy, mental health and employment. Adult literacy difficulties was predicted by the five year old child being in a group with more general difficulties (Odds ratio [OR] 4.35) and a group with difficulties specific to language (OR 1.59) after controlling for demographic and other variables. Adult mental health difficulties were associated with the child being in the group with specific difficulties in all but the final model whereas being in the group with the more general difficulties continued to be strongly associated with adult mental health irrespective of what else was included in the analysis (OR 2.9). Being in either group was significantly associated with low employment.

### ***Behaviour and the criminal justice system***

The capacity to interact effectively influences wellbeing in other ways. Research suggests that the result of an inability to interact effectively with others in accessing the curriculum can, in some cases, lead to behavioural problems in children and young people with SLCN<sup>11 12</sup>. This increases the risk of their exclusion from school and, in the most extreme cases, can lead to young people entering the criminal justice system. Leaving education aged 16 into Not in Education, Employment or Training (NEET) status has been linked to later criminal activity, early parenthood, long-term unemployment and substance misuse<sup>13</sup>. One rather special case which has attracted recent attention is the young offender and prison populations. The Royal College of Speech and Language Therapists in the UK state that it is estimated that over 70% of young people in the justice system have difficulties with their language and communication skills other research shows that around 60% of young people in contact with youth justice services in Scotland actually have speech, language and communication needs<sup>14 15</sup> in the sense that they need to be supported to communicate effectively. These needs have the potential to influence every aspect of offenders' experiences of the justice system, making it more difficult for the individuals concerned to access rehabilitation services and respond to those services when they are available and therefore break the 'cycle'.

It has also been reported that 50% of the UK prison population has literacy difficulties, compared with 17% of the general population, and 35% of offenders have only basic level speaking and listening skills<sup>16</sup>. Vulnerable young people with communication problems may be unable to express themselves effectively, resulting in disruptive and aggressive behaviour<sup>17</sup>. Because of the high number of young offenders with speech and language difficulties (54) there are serious implications for the way justice is done and for their rehabilitation<sup>18</sup>. This is particularly important given that most offending behaviour programmes – such as Thinking Skills programmes – are structured so that they demand high levels of literacy and oracy to take part<sup>19</sup>. There is not much evidence of interventions taking place within prisons to address this<sup>20</sup> but research has been cited which found that offenders gaining oral communication skills qualifications were 50% less likely to re-offend in the year after release than the national average.

## 5. Language delay

### *What is “language delay”?*

Experience tells us that most children learn to express themselves in the first two or three years of life without too much effort, yet some do not, and in the early years at least these children are commonly said to have a *language delay* or be *language delayed*<sup>i</sup>. This means that children’s language skills are developing significantly more slowly than other children of the same age. Children who have language delay start to use words slower than other children and are then slower to put simple sentences together by the age of two or three. This has a knock-on effect on their ability to express themselves more generally and they are likely to have difficulty responding to questions or telling stories. While the language development of most other children develops very quickly over the first three or four years of life the language skills of children with language delays may continue to lag behind and can affect early reading skills, classroom performance and the ability to make friends.

Language delay is commonly distinguished from speech delay and other communication difficulties that can occur without affecting language. It can occur in isolation but is commonly associated with other conditions. Thus the language of children who have a hearing loss or a learning disability is often described as delayed especially when they are very young. The term is not normally used to describe the English language skills of children whose first language is not English unless it is clear that their skills in their family language are also delayed. The use of the word “delay” suggests that the sequence of the child’s language development is following the normal pattern and it is sometime contrasted with language “disorder” where the pattern of development is said to be unevenly disrupted. Similarly a distinction is commonly drawn between language delay and “specific language impairment” where a child’s language is slow to emerge but there are no other associated difficulties. In practice these distinctions are not always easy to make and there are no clear criteria for the level at which a child is considered to be delayed rather than within the normal range of language development. Commonly practitioners talk about children falling below a certain threshold for example below -1 standard deviation of the mean for a given test or below -1.5 or -2 standard deviations suggesting that the children are in the bottom 16, 7 or 3 per cent of the population. But other researchers have sought to describe what children are not able to do at a specific age and given a particular developmental milestone.

The term “language delay” tends to be used to refer to relatively young children, perhaps up until the end of the “early years” period. It is much less common to hear it being used to describe, for example, a twelve year old. Nevertheless, there is plenty of evidence that for some children difficulties persist, the assumption is sometimes made that by this stage their language will have caught up and be indistinguishable from that of their peers. We use The World Health Organisation<sup>21</sup> definition of early years which covers the range from ‘prenatal development up to 8 years of age’. Although designed to capture the point at which children generally enter the education system, earlier in some countries, later in others, it has the advantage of including access to national assessments in the UK system where children start school relatively early.

Language delay is thus a description that may be applied to many children in the first few years of life. As such it can be of concern to parents, practitioners and more recently policy makers. Key to

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<sup>i</sup>A wide variety of terms are used to describe the skills of children who are slow to start speaking. Language delay is probably the most common term for young children but we also hear the term “late talker” being used. If difficulties persist the terms, language impairment, specific language impairment or language disorder are used. A distinction is sometimes drawn between language delay and speech delay or even communication delay although the distinctions are not always clearly drawn. Most recently the term Speech, Language and Communication Needs (SLCN) has been adopted after the Bercow Report (Bercow 2008) to describe the whole range of children whose communication skills are affected across childhood.

understanding and communicating about language and language related skills (speech, vocabulary, grammar, verbal comprehension and social communication skills) is measuring them effectively. There is now a wealth of psychometrically robust ways of doing this. It can be difficult to assess very young (below two years) children directly and parental report measures are commonly used in the youngest age groups. One of the challenges is that while we might want all early years workers to be able to carry out and interpret the output from such measures, the reality is that they often require specific training in terms of administration and interpretation and that it is often necessary to call on the expertise of specific professionals to carry out such measures. There has been an on-going discussion about the use of screening tests carried out by paraprofessionals or non-specialists. The broad conclusion is that while the idea of a “screener” works as a metaphor and seem appealing it has proved very difficult to develop such measures which are accurate enough to warrant roll out. Specificity (whether the screen over identifies children who don’t have problems) and particularly sensitivity (whether the screen is accurate with the children it does identify) are generally too low. The solution lies in ensuring that in the course of regular activities to develop and support language development, that intentional monitoring of children by early years professionals, is key. This highlights the need for early years staff, such as those in Goodstart, to be able to do this effectively and identify when children need extra help.

#### *The antecedents of language delay*

It is sometimes assumed that children have the same intact language potential, but recent evidence from the field of genetics (and specifically twin studies) has suggested that the playing field is not as level as was once suggested. In early childhood, shared environmental factors account for most of the variance in early language, and as children move into middle childhood and adolescence the genetic factors play an increasingly dominant role. The effect of genetic factors remains relatively constant thereafter. Genetic and shared environmental influences contribute to low expressive language ability in particular<sup>22</sup>. As increasingly severe cases of expressive vocabulary delay were identified the heritability of low expressive vocabulary increased and the influence of shared environmental factors.<sup>23</sup>.

Genetic influences can emerge over the course of a child’s development and this relationship can differ for children from different socio-economic backgrounds<sup>24</sup>. One of the key issues is whether heredity plays a greater role in children from families with lower or higher socio-economic status (SES). Here the interpretation of the data differs. Some studies have suggested that heredity is stronger for less disadvantaged children at least as far as IQ<sup>25</sup>, vocabulary<sup>26</sup> and reading<sup>27</sup> are concerned. Children who live in higher SES families have stronger genetic influences on cognitive ability (language and developmental intelligence) than those from more disadvantaged families (lower SES). At 2 years of age genes accounted for 50% of variation in high SES families compared to 5% in children from low SES families. Yet this finding has not gone unquestioned. Other researchers have suggested that there may be significant interaction effects for verbal ability with family chaos, instructive parent–child communication and informal parent–child communication and concluded that there was greater group heritability in high risk environments and that this relationship was particularly true in the most disadvantaged groups<sup>28</sup>.

Although the role played by genetics is clearly important, that played by the environment has received more attention. In the most commonly cited study describing the relationship between how parents speak to their children and the level of their children’s subsequent language development Hart and Risley<sup>2</sup> recorded in detail and on a monthly basis the way that 42 parents from different social groups in the US talked to their children between 10 and 36 months of age and the relationship between the amount of input that such children receive and their language development at three years. The cumulative language experience, measured in terms of the number of words heard, of

children from three groups (professional, working class and “welfare” families) are summarised in the figure below.



Figure 1: Amount of language (in words spoken to children from different social groups (Hart and Risley 1995

The number of words directed towards a child over a given year ranged from 11 million in the “professional” families to 3 million in a “welfare” family and this pattern was reflected in parenting style and in the amount of encouraging feedback that the children had experienced and also in the non-verbal IQ and tested vocabulary scores that they achieved.

They concluded that

*“The social distinctions between professional and working class have increased. In our small sample of American families we saw virtually all the professional families preparing their children for symbolic problem solving from the very beginning of their child’s lives. We saw them devoting time and effort to giving their children experience with the language diversity and symbolic emphasis needed for manipulating symbols; we saw them using responsive and gentle guidance to encourage problem solving; we saw them proving frequent affirmative feedback to build the confidence and motivation required for sustained independent effort. We saw how strongly related the amount of such experience was to the accomplishments of children from working-class families. But we saw only one third of the working class families and none of the welfare families similarly preparing their children.” p.204.*

Numerous studies have supported Hart and Risley’s broad conclusions about the way that parents talk to children and the potential impact that this can have on language. Depending on the criteria used, SES identifies attributes of the home environment, such as reading frequency, cultural activities and church attendance and it is the home environment that is associated with early language acquisition<sup>29 30</sup>. Low parental educational level is a risk factor for speech and language impairment<sup>31 32 33</sup> as mothers with a low level of education tend to talk to their children in fewer utterances and with poorer vocabulary than mothers who have higher education<sup>34</sup>, although it should be recognised that this is not always found to be a significant factor<sup>35</sup> and there always remains the question as to whether the parent’s low educational attainment may be related to their own language and cognitive skills.

Other specific aspects of the child's early environment which have attracted attention are television watching, childcare arrangements, what are known as "neighbourhood effects" and schooling. The effects of watching television depends upon what is watched, with positive relationships noted if the chosen media is appropriate to the age of the child<sup>36</sup>. There is evidence that children who are heavy television users have lower language scores, yet children's entertainment television can provide opportunities for verbal interaction and talk<sup>37</sup>. The issue is more about how children watch television rather than the length of time that they are exposed to it. While the emphasis is often placed on the television itself it is more important to focus on the child's wider communication environment. Children's environments also differ according to childcare arrangements, and where the child spends their time during the day. A review of social context support and language development (26) reports that the amount of language directed at children in the childcare setting is a positive predictor of children's language development at 15, 24, and 36 months (using standardised tests and maternal reports) although child care experience only accounts for 1.3-3.6% of the variance. Broadly speaking, the impact of integrated child care and education is beneficial for children, especially from multi-risk families<sup>38</sup>.

As we have seen social interactions with others provide a framework through which young children learn the forms and features of language. Children whose social experience provides more communicative opportunities and richer input build their vocabularies at a faster rate than children with less communicative experience and less rich input, indicating that the language acquisition mechanism makes use of the communication experience and language data. But such interactions are not solely the responsibility of the parent. Peers can provide opportunity to engage in joint planning, negotiating conflicts and telling stories and may be an important source of input for language acquisition, although not sufficient alone as children must get input from expert speakers in fairly substantial amounts. Language experiences at school can differ to those at home, and there may be a discontinuity between these environments for children from disadvantaged backgrounds. Being in school is associated with more rapid language development than not being in school and it has been noted that children's language skills progress more rapidly during the school terms than over the summer holiday. Research suggests that training in language practices for early years' teachers can have a positive effect on the vocabulary of the children in their class and the amount and quality of language input has effects on children's language development.

### ***Does living in poverty affect language development?***

Summaries of prevalence data have been notoriously difficult to interpret because they are so sensitive to the age the question is asked, the way that the need is identified and who says whether the child has a need or not. Summarised as long ago as 1998 the median figure was 5.58% across childhood, although the range was very wide. The figure that has been most widely cited throughout the nineties and the first decade of the 21<sup>st</sup> century has been Tomblin's<sup>39</sup> figure of 7.4% for children with specific language impairment based on a carefully constructed way of measuring the level of child's difficulty across a whole population. With two exceptions, the most recent studies have not sought to identify the level of need in the more socially disadvantaged populations. Locke and colleagues reported up to 50% in a population of children in nursery in very disadvantaged areas of Sheffield at four years of age all of whom were in the lowest IMD quintile, a figure which dropped to 30% by 5 years<sup>40</sup>. Law and colleagues reported similarly high figures for a population in a school in Edinburgh where all the children's postcodes fell within the lowest quintile<sup>41</sup>.

Although, taken together, these studies give a sense of the range of prevalence estimates, we are still left with uncertainty as to the extent to which it is a phenomenon that affects all but the most socially disadvantaged equally or whether there is a social gradient - i.e. those that are most disadvantaged have scores lower than the next group up and so on. To establish this we need to look at large populations of children at the same age and using the same measure of language development. Fortunately there are now a number of representative cohorts which allow us to do just this. In

Figures 2-4 below we see this relationship in three cohorts in the UK, Scotland and Victoria, Australia at five years of age. The first is the Millennium Cohort Study (<http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=851&sitesectiontitle=Welcome+to+the+Millennium+Cohort+Study>) in the UK using the Naming Vocabulary Scale of the British Ability Scales, the second uses the same measure in the Growing Up in Scotland (<http://www.crfr.ac.uk/gus/index.html>) study which, as the name suggests relates only to the population of Scotland. The third is the Early Language in Victoria study (ELVS) (<http://www.mcri.edu.au/research/research-projects/elvs/>) study in Melbourne, Australia using the core score from the Preschool Vocabulary Scale. The data were all collected between 2005 and 2010. The measure of social disadvantage varies across studies. The IMD and the SIMD (Scottish Index of Multiple Deprivation) differ from one another and from the SEIFA (Socio-Economic Indexes for Areas) but the elements within each scale are similar. In each case the five quintiles for disadvantage are presented across the bottom of the graph with the lowest quintile (the most disadvantaged) on the left. On the vertical axis of the graph we have the language level on the measure concerned. The red line is the line representing the average score for the test. The box and whisker plots show the median (the line in the middle of the box), and interquartile range plus the overall range for each of the social groups. The pattern of results broadly remains the same. Three conclusions may be drawn from these data. The distribution of language scores for each social group is very wide and to all extents and purposes they overlap. This means that many children in the most disadvantaged groups have perfectly acceptable language skills. That said, we see a clear social gradient in each graph, the median for each group declines with social quintile. These differences tend to be statistically significant but the sample sizes are large. The difference at least for the MCS and ELVS cohorts appears to be more pronounced at the more disadvantaged end of the distribution.

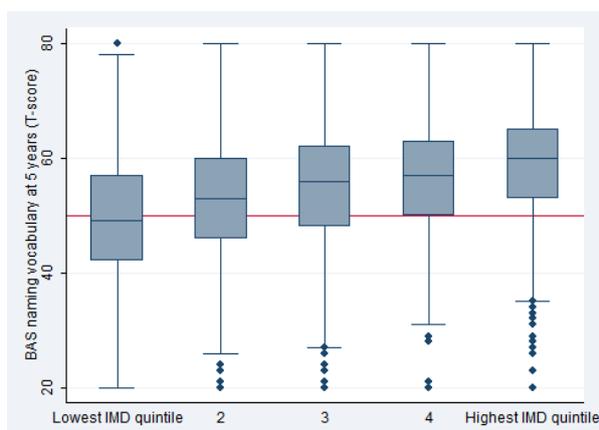


Figure 2 Data from England - The Millennium Cohort Study (MCS) <sup>ii</sup>

<sup>ii</sup> With thanks to Tom King, statistician, School of Education, Communication and Language Sciences, Newcastle University UK

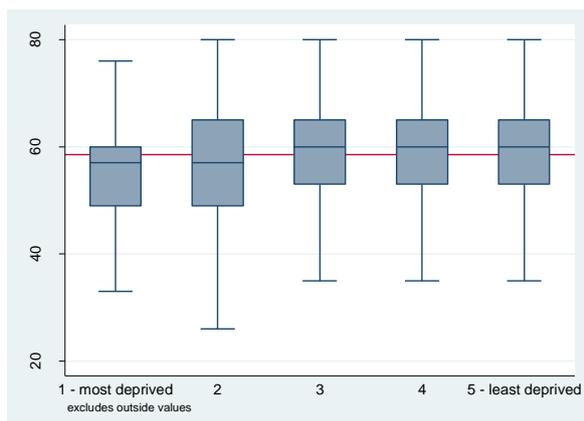


Figure 3 Data from Scotland - The Growing Up in Scotland Study (GUS)<sup>iii</sup>

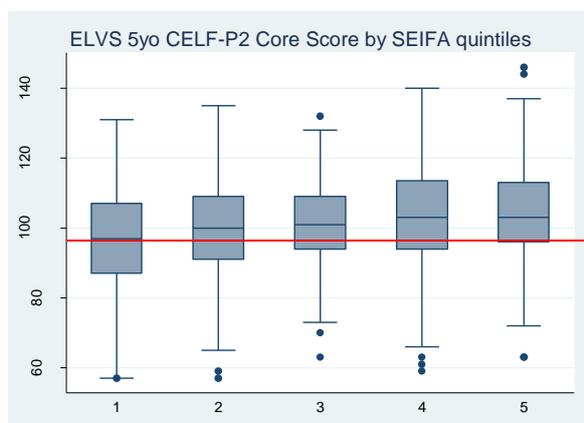


Figure 4 Data from Australia – The Early Language in Victoria Study (ELVS)<sup>iv</sup>

Finally, in Table 1 we ask to what extent the prevalence rates vary across social groups. Recall that these are not referred populations and we establish whether a child is or is not described as language delayed by their performance on the relevant language test at five years. Here we use the same threshold in the three studies namely one standard deviation below the mean for the test concerned. This corresponds to a prevalence of 16.6% in a “normal” population.

Table 1. Prevalence of language delay (%) at five years with a threshold of -1 standard deviations below the mean

Cohort	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Millennium Cohort study	18	10	7	5	3
Growing up in Scotland	23	18	15	11	10
Early Language in Victoria Study	21	16	7	12	6

<sup>iii</sup> With thanks to Paul Bradshaw from Scotcen, Edinburgh, UK.

<sup>iv</sup> With thanks to Professor Sheena Reilly and Dr Eileen Cini, Murdoch Children’s Research Institute, Melbourne, Victoria, Australia.

Although the figures differ we see a relatively consistent pattern especially in the lowest quintile where the rates are higher than anticipated (18-23%), figures which will be of direct relevance to the provision of services in Goodstart Centres

Clearly such discussions are prefaced on an understanding of the population that Goodstart is seeking to target and this needs to be explicit although may differ from one area to another.

#### QUESTION SET 1 Knowing the target population

- *Is it clear that Goodstart Centres act at a population level?*
- *Do they know their baseline population (ie in terms of birth rates/social levels of social disadvantage etc)?*
- *Is the service universal (ie potentially all children) or selective (for specific subgroups? What proportion of that target population does the Goodstart centre service and is it the right group who stand most to benefit from the interventions offered?*
- *Do Goodstart populations differ from the “general” population and if so is there evidence that this makes a difference to outcomes?*

Key to successful improvement of language outcomes for Goodstart’s “children” is how well Goodstart interacts with existing local early years services such as child health nurses and speech and language pathologists.

## 6. What are the policy implications of child development in general and language development in particular?

A number of policy documents have highlighted the critical role played by child development in the early years. With the exception of the Bercow <sup>42</sup> report these do not focus specifically on communication or early language delay but language is commonly considered to be a key feature of these early developmental skills. Nonetheless one could argue that the route into improved outcomes for children starts with an understanding of these issues at a policy level – both internationally, nationally and within Goodstart itself. Here we review some initiatives primarily in the UK but of direct relevance to the context in Australia.

Probably the single most important document on the relationship between social inequalities and health, The Marmot Review <sup>43</sup> highlighted that the key role played by the transition to school and the potential problems that can arise when children do not have the pre-requisite skills or “school readiness” to make this transition satisfactorily and that early school difficulties are associated with a variety of negative outcomes. Those from disadvantaged backgrounds often struggle with the move to a more formal approach to learning, and even the best primary schools find it difficult to cope with an intake of children who lack “school readiness”. The review proposed the introduction of an indicator of readiness for school to capture early years’ development based on information collected at 5 years from the Early Years Foundation Stage (EYFS). As we have seen communication skills are necessary component of for school readiness in order for them to have the best possible learning experience. The role that language delay can play in accentuating social exclusion was also picked up in a policy document produced by the charity ICAN <sup>44</sup>.

A report from the The Centre for Social Justice in the UK entitled “Early Intervention: Good parents, Great Kids, Better Citizens” emphasised the importance of the first three years of life <sup>45</sup>. The authors suggest that there are “sensitive windows” in child development when specific learning takes place, and if it doesn't those skills may never fully develop. The report suggested that the solution was an all-party approach to tackle the causes underlying social deprivation including teenage pregnancy, anti-social behaviour, low educational attainment, drug and alcohol abuse and poor parenting. It highlights

the importance of Early Intervention - which they argue is cheaper, and more effective, than what they consider the current and more expensive option of intervention introduced once a child had started to fail. Their long term plan for Early Intervention is designed to break the intergenerational cycle of underachievement, evident in many inner and outer city estates, by helping all 0-18 year olds become good parents, to optimise their impact on the 0-3 age group when the authors considered that positive nurturing has its greatest impact. The authors recommend early intervention to start with a pre-natal package moving onto a postnatal family nurse partnership. They also recommend use of Sure Start children's centres to promote parent's ability to play and communicate with their children and aid the development of language and readiness to learn. Primary school follow-on programmes should offer parent support and focus on the development of language, literacy, numeracy and social competencies. Finally, like Marmot, they also recommend 'school ready' assessments and programmes that support the young people and their parents through to secondary school.

The Allen Reports <sup>45, 46</sup> took this one stage further, emphasising the need for early intervention to promote social and emotional development and thus significantly improve mental and physical health, educational attainment and employment opportunities and it is important to work together effectively to reap the benefits of early identification <sup>46</sup>). The reports highlighted the need for interventions to help break the intergenerational cycle of deprivation and have listed interventions that are considered to give the best value for money in tackling the problem. One of the gaps in this work is its failure to identify the role played by communication or the interventions available to meet this need. Although, the report looks at intervention in early childhood it missed the opportunity to identify cost-effective ways of improving life chances, increasing social mobility and reducing crime by enhancing communication skills <sup>47</sup>. The second of Allen's reports sets out how the government will pay for the programmes and recommendations made, such as the setting up of Early Intervention Foundations to provide advice and support to local commissioners on evidence and building a strong evidence base on what works in Early Intervention in the UK <sup>48</sup>. He recommends that some of the investment should come from outside the public and charitable sectors, in order to ensure financial sustainability. As far as we are aware the solution to the funding of such programmes has yet to be resolved.

The Field Report (68) also encourages a focus on the early years: 'We have found overwhelming evidence that children's lives are most heavily predicated on their development in the first 5 years of life' (p. 5). It established a set of life chance indicators to measure how successful the country is in making the life outcomes more equal for all children. It identified that language and communication development at age 3 is number one in these indicators. The report also suggests that schools should teach parenting and life skills throughout the whole of their school life to encourage good parenting of future generations to help break the poverty cycle.

## **7. How can childhood educators identify children with language delays?**

Although much of the policy related documents cited above are education related, the fact is that many language delayed children are initially identified and managed through the health system. This applies in Australia as it does in the UK although decision making as to what the services comprises is at a state rather than a national level as it is in the UK. In particular they fall within the child health surveillance agenda through which children are identified by public health professionals, specifically health visitors and often referred on to speech and language therapists, the majority of whom work within the NHS in the UK. With prevalence rates of the order of these described above and the overwhelming picture that early development and support is critical for subsequent attainment it is tempting to suggest that the solution is to put in place a systematic programme of population screening which will pick up the right children who can then be treated or at least provided with the

necessary support to redress the balance in terms of their peers. Until the late 1980s this was the preferred option in the UK where health visitors screened children's development at various points. An evidence based report, Health for All Children<sup>49</sup> which became known as the Hall report after its original author questioned the accuracy of many of these procedures. This was found to be true for language delay<sup>50</sup> less because no screens existed (there were 78 identified in this piece of work) but because of our limited understanding of the "natural history" made it difficult to predict which children would be likely to have persistent problems (and would thus be most in need of support). This report is supported in the international literature<sup>51</sup>. The Hall report recommended health surveillance and latterly health promotion as methods of engaging with parents but without formally screening children. This position remained in place through the nineties as a specific screening procedure dropped away. This has changed somewhat in recent years as the Healthy Child Programme (HCP)<sup>52</sup>, as it is now called, has made specific suggestions for assessments that health visitors might wish to use<sup>53</sup> ( and there are similar recommendations in the US:

The Healthy Child Programme is the National Health Service's framework for provision in the foundation years. It is the early intervention and prevention public health programme and provides invaluable opportunity to identify children at risk of poor outcomes, in order to provide them with additional support. It aims to build the HCP team across general practice and sure start children's centres with increased focus on vulnerable children and families. Every child has a health and development review at various stages in their development, and speech and language is just one part of this assessment. At six months to one year, health visitors are recommending book sharing and giving invitations to groups for songs, music and interactive activities, to promote speech and language development. Similar groups are recommended at the 2-2½ year review, along with other relevant signposting to additional support. Health Visitors also encourage early year's education to promote child development. At the 2-2½ year review Bookstart is also shared to promote books and shared reading. One of the aims of HCP is to narrow the gap in educational achievement between children from low-income and disadvantaged backgrounds and their peers. This should also be the aim of Goodstart programme and requires close monitoring of children relative to the national average.

## 8. What kind of interventions for language delay are effective?

In the next section we look at the evidence underpinning practice. Underpinning such approaches is an understanding of the logic model or theory of change that interventions are using. It is important that Goodstart has a clear idea of the mechanism it is employing to promote change. It is only this way that we can start to pick out what are the "active ingredients" of any intervention programme that are a prerequisite for all programmes and which elements might be considered "supplementary".

### QUESTION SET 2 Mechanisms for change

1. *Does Goodstart have a well-articulated "theory of change" or "logic model" explaining how the Goodstart model of intervention brings about change in parents and children?*
2. *Do staff recognise this theory of change and adhere to it in terms of shared messages and messages for parents?*

This section will provide a series of examples of "good practice" from a series of other programmes which have sought to enhance children's development and language development in particular. But before we do we will look at some recent work from the UK's Education Endowment Fund summarising the effects of oral language interventions in the early years and in the primary school period. To reach these summaries they have reviewed the literature and sought to combine the results of the best quality studies using meta-analysis (specifically a statistic known as Hedges G). The results can be viewed in greater detail on the Education Endowment Fund's website.

The early years approaches to language and communication skills using this approach <https://educationendowmentfoundation.org.uk/toolkit/early-years/communication-and-language-approaches/> The authors conclude (and it is worth quoting this in full):-

“Overall, studies of communication and language approaches consistently show positive benefits for young children’s learning, including their spoken language skills, their expressive vocabulary and their early reading skills. On average, children who are involved in communication and language approaches make approximately six months’ additional progress over the course of a year. All children appear to benefit from such approaches, but some studies show slightly larger effects for children from disadvantaged backgrounds (up to six months’ additional progress).

Some types of communication and language approaches appear, on average, to be more effective than others. There is consistent evidence that reading to young children, and encouraging them to answer questions and talk about the story with a trained adult, is an effective approach. A number of studies show the benefits of programmes where trained teaching assistants have supported both oral language and early reading skills. Most studies comment on the importance of training and teacher development, and supporting teachers with the implementation of different approaches. There are indications that practitioners should take a range of different approaches to developing communication and language skills, as it is unlikely that one approach alone is enough to secure progress.”

They then go on to comment on how secure they find the results and on the costs

“There is a secure evidence base showing the impact of communication and language approaches, including a number of meta-analyses. The evidence is relatively consistent, suggesting that communication and language approaches can be successful in a variety of environments. The evidence base includes a number of high quality studies from the UK. Little is known about the long-term impact of communication and language approaches, so additional evidence about whether and how to ensure that benefits are maintained once children start school would be valuable.

Overall, the costs are estimated as very low. There are few, if any, direct financial costs associated with this approach. Additional resources such as books for discussion may be required. In a recent UK evaluation the cost of these additional resources was estimated at between £10 and £20 per pupil. Professional development or training is also likely to enhance the benefits on learning.”

There are pros and cons of combining intervention results in this way but overall they provide a clear message as to the value of this type of intervention although it is important to be bear in mind that some studies have not given such positive results and it would be wrong for Goodstart or any other organisation to assume that positive outcomes are inevitable irrespective of what the intervention comprises.

Another approach is to use this type of database as a means of encouraging practitioners to make evidence based decisions about specific interventions themselves. Entitled the “What works for speech, language and communication needs” (<http://www.thecommunicationtrust.org.uk/whatworks>) this database allows practitioners to make choices about the best available evidence based intervention. The majority of these interventions are targeted or specialist and most are carried out by specialist practitioners. They are also relatively discrete and time limited. The reality, of course, is that many such interventions are more generic (not solely focussing on language) and are not time limited. We now turn to review some specific programmes which have attracted attention in recent years. The first group might best be termed generic interventions, the second group language specific interventions. Finally, in this section we turn to professional roles and discuss the specific roles that teachers and early years worker can play in the process of intervention.

## Generic interventions

### ***Sure Start***

In the UK we have seen the Sure Start programme develop in England over the last decade. Although the programme was supported by a number of well understood key principles:

- To co-ordinate, streamline and add value to existing services for young children and their families in local communities.
- To involve parents.
- To avoid stigma.
- To ensure lasting support.
- To be sensitive to local family' needs.
- To promote the participation of all local families.

Sure Start also focussed on early language development and specifically recognised interventions that are aimed at compensating for the developmental and educational impact of poverty<sup>54</sup>. Such recognition is made explicit in the measurement of language skills in evaluations of Sure Start. Sure Start was a government led initiative aimed at giving every child the best possible start in life and which offers a broad range of services focusing on Family Health, Early Years Care and Education and Improved Well Being Programmes to children aged 4 and under, although the age range was subsequently extended. The Sure Start programme was formally evaluated although without the use of a randomised controlled methodology. Relatively few differences were found between those children who received the Sure Start intervention and comparable areas that did not<sup>55</sup> suggesting that care needs to be taken in assuming that universal interventions will necessarily be effective. Concern was raised about the lack of a consistent curriculum and the fact that the different elements of the intervention had not been previously evaluated under optimal conditions and the lack of differentiation between the groups served. Some populations within Sure Start areas may be in need of different levels of help. Interestingly Sure Start did include a strong language focus in many Sure Start Local Programmes (SSLPs) and the language skills of children in programmes in England was audited on three occasions<sup>56</sup>.

### ***Family Nurse Partnership Programme***<sup>57 58</sup>

The Family Nurse Partnership (FNP) is a preventative programme which offers intensive and structured home visiting for young first time mothers and is delivered by specially trained nurses (Family Nurses). It has been tested in England since 2007 with more than 6000 families having received FNP so far. It is currently being tested in Scotland in NHS Lothian. The home visits take place from early pregnancy until the child is 2 years old with 22 visits taking place in toddlerhood (fortnightly for nine months when the child is aged 12-21 months and monthly until the child is two)<sup>59</sup>. The Family Nurse Partnership is often delivered through Sure Start Children's Centres and family nurses encourage clients to use these services, particularly in preparation for when the children reach the end of the programme, aged 2. Randomised Control Trials are being carried out in 18 sites in England to assess whether the Family Nurse Partnership benefits families over and above universal services and provide good value for money (the results of the RCT are due to be reported in 2013). A report from the Audit Commission<sup>60</sup> states that the FNP has a positive impact with some aspects of early years support (e.g. improvements in smoking cessation and breastfeeding prevalence). This report states that a 2009 evaluation showed that issues with the programme still remained, such as 14% dropped out during pregnancy, difficulty in the sustainability of the pilots and on-going service, a need for better integration into children's centres and the issue that FNP is targeted at a specific population group (first time parents under 20). In his recent report Allen reports on the quality of evidence on a number of early interventions and their cost effectiveness. The Nurse Family

Partnership was one of these interventions and was reported to meet many of the criteria he was looking for, for quality evidence. He also reported that the benefit to cost ratio ranges from 3:1 to 5:1 (based on data in the US). No specific language outcomes are reported for the FNP.

### ***Positive Parenting Programme (Triple P)***

Triple P is a multi-level behavioural family intervention delivered on a whole population basis with additional use on a targeted level. A large amount of research has been carried out to assess the effectiveness of Triple P, and a recent systematic review and meta-analysis has looked at this in more detail<sup>61</sup>. Results from the review suggest that group based intervention of Triple P may be effective in the short term (according to parental report of child behaviour); however, given the high risk of bias in parental reporting, studies do not provide evidence to support the view that Triple P provides other benefits to children. For maternally-reported outcomes the summary effect size was a moderate 0.61 (95% CI 0.42, 0.79). Paternally-reported outcomes following Triple P intervention were smaller and did not differ significantly from the control condition (effect size 0.42 [95%CI -0.02, 0.87]). The review suggests that there is lack of convincing evidence to support the cost effectiveness of Triple P but that some benefit may be achieved if interventions were focussed on the families of children with more severe problems. Allen (65) reports that Triple P has an overall score of 'good enough' when he applied the evidence criteria (of which it met 16/22), and that clinical changes have been noted in behaviour. No specific language outcomes are reported for Triple P. The other challenge with programmes such as Triple P and is common with all packaged programs, is that it is important to ensure that the theory of change adopted by the programme is adhered to by practitioners using that programme.

### Language specific interventions

"Bookstart" was widely used and was supported by many staff groups including early year's librarians and health visitors, though in some cases the latter had insufficient time to model the optimal use of books with very young children. Some SSLPs were aware of the importance of developing rhyme awareness but there was much less evidence of other pre-literacy work. In some SSLPs there was close collaboration between early year's library workers and SLTs. Many parents were grateful for the advice and information offered by the early year's librarians and those who had previously rarely used libraries found their support helpful and encouraging. SLT support to 'Ready for Nursery' groups had in some SSLPs focused on a speech, language and literacy link between schools and Sure Start programmes. There were variations in the ease with which different agencies could collaborate and focus on speech, language and literacy development or give priority to speech, language and literacy practice in their communication with parents.

Evidence from a number of well designed intervention studies focussing on speech and language skills has shown that a variety of interventions to be effective for children with primary speech and language difficulties<sup>62</sup> but these studies rarely focus on children from disadvantaged backgrounds. However, in a recent meta-analysis of the effects of vocabulary intervention on young children's word learning showed that not only was this skill very responsive to intervention but that the effects were higher for more rather than less advantaged children<sup>63</sup>. In the light of Hart and Risley's findings about the marked differences in vocabulary across social groups before children go to school one might have hoped that this would have gone the other way. So although both more and less advantaged children benefit there is little sense that the less advantaged groups catch up in any meaningful sense, although it is important to point out that the intensity and duration of the interventions described were relatively limited and this may be an important issue as far as intervention for low SES children is concerned.

In the light of the need to identify interventions that have been developed for very young children with language delay it is important to flag up the experience of The Ward Infant Language Screening Test, Assessment, Acceleration and Remediation (WILSTAAR)<sup>64</sup>. WILSTAAR was designed to provide a tool for the early identification and treatment of children at risk of developing language and cognitive difficulties. It is a structured reactive programme used to promote the language skills of children who have been identified as “at risk”. The WILSTAAR screening assessment was administered at 8-10 months of age to assess whether the infant is showing age-appropriate, pre-linguistic, listening and babbling behaviours<sup>65</sup>. Following the screening assessment, research has filmed interactions between parents and their infant to observe the social interaction and play in this situation<sup>66</sup>. Children deemed to be “at risk” following the screening test were indeed found to have poorer focused attention with lower levels of communication between mother and child. Children were then provided with intervention from a team of speech and language therapists in their home with their parents. The intervention was trialled although the results were somewhat inconclusive<sup>67 68 69</sup>.

### ***Interventions in the Better Communication Research Programme (BCRP)***

Current best practice in terms of children with delayed language development<sup>70</sup> was reviewed as a part of the BCRP in the UK to which reference was made above. In this report the experience of practitioners was brought together with the best available intervention evidence. We identified 58 interventions either currently in use or published in the research literature. We also identified two other interventions which we have called “Up and coming” because they are under development and there is insufficient evidence to judge their value. Of those that we have identified 3 (5%) were found to have the strong level of evidence, 32 (56%) had moderate evidence and 22 (39%) had indicative evidence. Seventeen (30%) of the interventions were specifically relevant for improving a child’s speech, 22 (39%) targeted language, and the remainder were aimed at a combination of speech, language, communication, and complex needs. Five were Universal or Tier 1 interventions, 13 were Targeted or Tier 2 and 16 were specialist or Tier 3 interventions. The remainder we considered likely to be used across waves, adapted to meet the needs of individual children. We conclude that there is a sound emerging evidence base with relative strengths in some areas. There have been too few large scale intervention studies to draw firm conclusions about how services should be delivered but there is plenty of positive evidence about individual techniques. . Recent research has begun to explore the possibility that the effects of neighbourhood disadvantage are multigenerational<sup>71</sup> with a families exposure to neighbourhood poverty over 2 consecutive generations reducing the average child’s cognitive ability by more than half a standard deviation (SD .61) and potentially affects developmental trajectories.

### ***Talking Time***<sup>72 73 74</sup>

Talking Time is an interactive oral language intervention package designed to support language and to foster communication with and between preschool children. The programme aims to develop children’s language before they reach primary school so that they are at a level where they can make the best use of language for learning and socialising when they start school. Talking Time supports the goals of the English foundation stage level curriculum by providing opportunities for children to communicate their thoughts, ideas and feelings and by giving children opportunities to share stories and experiences. It is characterized by targeting three key language skills namely vocabulary development, the ability to make inferences and the ability to recount a narrative (e.g. describe a recent event or retell a simple story).

An evaluation of the programme in nursery schools demonstrated that it was effective in improving oral language skills when children exposed to Talking Time were compared to those exposed to an alternative intervention. Children in the Talking Time intervention made significantly more progress than children in the alternative intervention in terms of both their understanding and use of vocabulary: they understood and produced more words than the comparison children. Talking Time

also improved children's development of expressive language, with significantly more progress in the Talking Time children's ability to repeat increasingly complex sentences, and to say longer sentences when they were talking. Thus, there was evidence that the building blocks of narrative skill were beginning to be put in place although the oral language skills of the children remained a cause for concern.

### ***The Nuffield Early Language Intervention Programme*** <sup>75</sup>

A recent research study <sup>76</sup> aimed to test the efficacy of language intervention in the early years and found that a 30-week intervention produced gains in reading comprehension mediated by gains in oral language. The 30-week intervention was delivered by teaching assistants, and the oral language programme aimed to improve children's vocabulary, develop narrative skills, encourage active listening and build confidence in independent speaking. The intervention appeared to be good at teaching vocabulary in weeks 11-30 (effect sizes 0.83-1.18) and letter-sound knowledge in weeks 21-30 (effect size 0.41). At a 6-month follow-up, the intervention group showed higher scores in reading comprehension than the control group. This research has been the driving force behind the Nuffield Early Language Intervention Programme which spans the preschool and reception class age range.

### ***Talk of the Town (TOTT)*** <sup>77</sup>

TOTT was set up following discussion with senior educational leaders in a specific area in the UK, keen to take a strategic, sustainable view of what can be done to improve the language skills of the children in their area, with a long term view of this issue and emphasis on its sustainability. In Figure 5 we provide an approach to conceptualising TOTT. For sustainability all elements of the programme need to be included. Each element of the programme is tied to specific elements of the evaluation literature. Key to this programme and unlike many of the interventions that have been carried out with regard to language development particularly is the conceptualisation of the programme at a population and neighbourhood level and its inclusion of workforce development as an intrinsic element of the programme. So the first stage is to establish what it is that constitutes the interventions offered within Goodstart, are they consistently administered and do we know how effective they are?

### **QUESTION SET 3 Evidence based early years intervention**

- *What are the current practices in Goodstart to support language development for all children?*
- *What are key features of the interventions currently offered in Goodstart?*
- *Do we know that staff in Goodstart centres follow evidence based principles?*
- *How do we know?*
- *What evidence is there for this in terms of the actions of the staff and the outcomes for the children?*
- *If Goodstart centres are not using existing evidence based interventions, why not?*

Key to the development of programmes with young children is the way that parents are engaged in the process and whether they carry over the activities in Goodstart early years centres into the home environment

### **QUESTION SET 4 Working with parents**

While there is mixed evidence about the effectiveness of working with parents, especially with regard to the training of parents having an impact on the child's development, Goodstart would be wise to forge new ways of collaborating with parents with research protocol in place. Again this is a question of the logic model and the risks associated with assuming that you can change children through proxies (parents, teaching assistants).

- *To what extent are parents actively engaged in Goodstart programmes?*
- *Do parents understand the objectives of Goodstart?*
- *Is there evidence that they change their own behaviours if this is shown to be warranted?*

- *How much are they involved in “owning” and developing the portfolio of Goodstart interventions?*

Of course, parents are also one of the most significant factors in lobbying for better childcare facilities. This leads to a second set of questions about how parents are best engaged in this lobbying process.

#### QUESTION SET 5 Lobbying for and with parents

Although the literature rarely captures the parents perspective on their child’s language development clearly it is important the parents group to lobby for better services. The more assertive they are the better the services that they receive are likely to be and vice versa.

- *To what extent are parents meaningfully involved in the running of Goodstart?*
- *What role should Goodstart play in facilitating the organisation of groups of parents with a common interest in improving services for children with language and communication difficulties?*

One area that has attracted attention in recent years is the child’s perspective. Do children know why they are being asked to be involved in certain interventions and are there better or less useful ways of effectively engaging children? The idea that children are passive recipients of behavioural interventions has long been discarded in the child development literature (see next question set).

#### QUESTION SET 6 The views of children

In most of the interventions described, there is an assumption that the interventions are something that are done to children, but there has been work in the UK asking children their opinions of the services they receive and how they could be improved from the child’s perspective. This may already be a part of the audit cycle in Goodstart but this sort of work has tremendous potential from a research perspective.

- *To what extent is this approach already a part of the objectives of Goodstart?*
- *Is it possible to give examples of children changing the nature of the services they receive? Should this become commonplace?*

#### Professional roles

Clearly overcoming early language delay is the province of a wide range of professionals working with the parents at home and with the children in early years settings and schools. As indicated early language delays are linked to many other aspects of a child’s profile and with the possible exception of the speech and language therapist no one professional specialises in language on its own. The key is that all of those working with young children need to be aware of these issues and prioritise the development of the child’s language skills, something which everyone should contribute to. While there may be value in assessing the children individually at certain points in their development most of the work with language delayed children will take place in groups and in early years centres, mirroring their natural environment. This issue of collaborative working has been picked out by virtually all the above reports aiming to promote early child development. Teachers, educational psychologists, health visitors and speech and language therapists need to work closely together with common aims. In practice this tends to happen where considerable energy has been devoted to building teams of the professionals concerned.

#### QUESTION SET 7 The right professional skill mix and the development of social capital

The range of evidence suggests that that interventions to develop language in children are not confined to any one professional group. One concept that is very useful in this respect is that of social

capital, the way that staff interact with one another and the extent to which this has a demonstrable effect on the child's outcomes. This raises the question of how social capital is fostered between internal staff and across staff in other agencies.

- ***What is the right balanced of specialist and generalist skills to support all children and meet the needs of children with language learning difficulties?***

The targeted interventions for children with the more pronounced difficulties have tended to be carried out by speech and language therapists or specialised early child educators. The critical thing is that those providing the interventions are both sufficiently well trained in child development (not just child care) and that they are experienced in matching the child's developmental levels with their needs. Where children have less pronounced difficulties but are nonetheless delayed the balance of skills needed becomes more difficult to establish. It would be wrong to assume that general stimulation was sufficient for many children's needs.

- ***Similarly asking teaching assistants without the requisite training and support is unlikely to be a good solution or, if it is assumed that it is, what evidence would support this position?***
- ***Do staff have the expertise to make decisions about children's needs?***
- ***Are external professionals actively engaged with Goodstart centres and is this collaboration effective from the perspective of the child's outcomes?***
- ***To what extent does Goodstart foster social capital amongst its staff?***

#### ***Costing services for children with language delay***

Much has been made of the claims of Nobel laureate economist James Heckman's statement drawn from his work on prospective data from Head Start and other early intervention evaluations<sup>78</sup>

"The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantaged families. Starting at age three or four is too little too late, as it fails to recognize that skills beget skills in a complimentary and dynamic way. Efforts should focus on the first years for the greatest efficiency and effectiveness. The best investment is in quality early childhood development from birth to five for disadvantaged children and their families." <http://www.heckmanequation.org/>

The positive for interventions to promote early language skills is rather less clear, primarily because so few studies have specifically addressed this issue<sup>79</sup>. A recent study looking at the longer term costs and benefits of enhanced speech and language therapy is an example<sup>80 81</sup> showing that when benefits are identified in terms of (the present value of) lifetime earnings; an *intermediate* outcome, rather than a *final* outcome which would reflect changes in health and welfare as single point spent in childhood in remediating early language delays has the potential to deliver six fold in terms of lifetime savings. Such studies are often based on models in which data from a number of studies are fitted together to identify future impacts. In the absence of good quality comparative research evidence, assumptions are sometimes used for some parameters. The lower the availability of good quality comparative evidence for these models, the less sure one can be that the savings or monetary benefits identified by the model will actually appear.

In summary, much is known about what constitutes good practice for promoting child development in schools and nurseries and much has been done to change practice over recent years although we know less about how well such interventions are distributed over the UK. The best evaluated early interventions which have been used in community settings show promise but rarely include language development as an outcome. There is a case for addressing this. Language interventions have often been developed for "clinical or referred" populations and there is relatively little evidence for their use in more disadvantaged populations. By the time children reach school age, programmes may be less important in the classroom and the training and support of teachers to encourage them to specifically work on enhancing the more vulnerable children's language development becomes a critical issue. Language development has, as we have seen, received increased prominence in recent

years but the body of evidence available to make judgements about what interventions to roll out remains relatively weak. Although many interventions have been shown to “work” at some level the fact remains that interventions need to accelerate language development not just improve it if the intervention is to genuinely narrow the achievement gap. Again we know too little about the costs relative to the benefits of most of the interventions currently in use to be clear about what provides the best buy as far as public investment is concerned

Much of the foregoing discussion is prefaced upon the assumption that the right child outcomes are in place to determine whether children’s language and other needs are being met.

#### QUESTION SET 8 The right outcomes

Child outcomes are central to this issue.

- *Does Goodstart have a clear sense of what these outcomes should be?. Language development is relatively easy to characterise and it is critical that outcome measures include expression, verbal comprehension and social communication; but the needs of children go well beyond language. Will Goodstart also pay attention to social/emotional outcomes? And collaborating with parents*
- *Do/will all Goodstart centres follow the same outcome framework?*
- *It is important here to tease out the differences and relationships among and between child and parent/family outcomes?*
- *If the parents feel better but the children do not change is this sufficient as an outcomes? This goes back to the issue of the logic model.*

And, finally, this raises the question of a programme of Goodstart research to demonstrate the role that Goodstart can both contribute to the science in the field of child development, and language specifically, show that what it is currently do is effective and help shape the early years agenda more generally in the Australia and across the world.

#### QUESTION SET 9 The future for Goodstart research

Clearly there is a great deal that is already known about evidence based early years intervention. These findings are sensitive to context and implementation depends on the findings being of value to the service providers.

- *Assuming that there is a consistent model of intervention and set of outcomes across all Goodstart centres, do we know, or will we know, that Goodstart outcomes are as good as other interventions?*
- *Has this/will this be trialled and properly evaluated?*
- *There is a strong case for carrying out such analyses and estimating how many months gain in a given year can we anticipate for a child attending Goodstart?*

One of the key issues for Goodstart like Sure start in the UK, is that it is critical that we know how children of a given socio-demographic background progress normally.

- *What should we expect in terms of developmental change and can we demonstrate that we have met these expectations. Do some groups change more over time than others? For example, do children who start with lower skills progress more (catch-up) or do they lag behind more and more as the one in the more advantaged groups race ahead?*
- *Do different ethnic/language groups do better or worse than their monolingual peers?*
- *Do boys do better than girls?*

Our data from Sure start in the UK suggested that the boys started lower and benefited more than the girls. These sorts of comparisons depend on having population data which can be

compared with the Goodstart intake. Fortunately in Australia we have the Longitudinal Study of Australian Children (LSAC)

- ***How do the data from Goodstart compare with population data from LSAC?***  
If not, there is a strong case for carrying out such analyses to obtain a better sense of the potential impact of Goodstart.

## 9. The emerging landscape for Goodstart's consideration

### *The potential role of Goodstart as a "healthy language" research leader*

Goodstart with its potential "laboratory" of 642 sites across Australia provides an ideal workshop to look at many of the issues discussed in the above document. In the Australian context, it has the advantage of offering a unique opportunity to have identical processes for supporting language development along with identifying, assessing and managing the needs of children with limited language and communication skills. This would not be possible in a system where states commonly make their own decisions about what is needed and these decisions are rarely compatible across state boundaries. Evaluating interventions in this field are complex and require clear leadership from senior management to work.

Language delay is relatively common but to carry out a properly developed study it is necessary for children to be carefully assessed and matched to make sure that groups are comparable. In particular it is necessary to be careful about family background and comorbidities such as behaviour and mental health. This often means that what looks to be a large sample of children is then reduced substantially. If we assume 100 children in each Goodstart centre with a 10% prevalence of language delay this would potentially give 6420 children. If we then assume cluster randomisation in an intervention this would easily give the study enough power to detect results.

## 10. Conclusions

Early communication skills have implications for the child's social and educational development across the early years and beyond. There is evidence that language competence is critical scaffolding for readiness to learn as well-developed communication and word skills are fundamental to a good start in the early years at school. Children with primary language difficulties are at higher risk of developing behavioural, emotional and social difficulties. This increases the risk of their exclusion from school and, in the most extreme cases, can lead to young people entering the criminal justice system. As such, communication is key to the fostering of life chances in early childhood.

This report draws on evidence which suggest that environmental influences, in particular, human relationships and interactions, play a strong role in the early years and that this is especially true of verbal comprehension or the child's ability to understand what is said to them. There is strong evidence that the amount that the child is spoken to and the way that they are spoken to makes a difference alongside related factors, such as the type of positive language learning experiences to which the child is exposed. This starts at birth and includes immediate and extended family and the wider community around the child.

Studies of whole populations reveal a clear social gradient for language with children from the most disadvantaged groups with lower language skills than those in the least disadvantaged groups. However, there is clearly a great deal more that we need to find out about how children come to be language delayed.

There are a number of existing early intervention programmes that have been developed and evaluated but they are not necessarily widely available, particularly interventions which specifically tackle both social disadvantage and language development as an outcome. There is a need therefore to scale up and roll out interventions that have been shown to work and test their value over time across whole populations. Any programme that is developed should be supported by effectiveness research built into the design of the intervention and should emphasise the whole child, their family and their community and be focused on the early years.

There are already a great many convergent policy recommendations suggesting that the focus on early child development and language in particular is an important societal priority. Timing is right therefore, for sustaining pressure on policy makers and commissioners to direct resources towards effective practice and improving services to meet the needs of children from more socially deprived backgrounds who are at a greater risk of having limited skills in language and communication. We know what can make the most difference to enabling young children to learn and develop to their full potential. We have a joint responsibility to work together more effectively than ever before to ensure that all children have a fair chance of succeeding at school and in life. Organisations such as Goodstart have the potential to play a pivotal role in implementing evidence based practice in this field by evaluating the implementation of the best available supports for optimising language development along with developing and assessing interventions in a timely and effective manner.

## 11. References

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- <sup>1</sup> Pinker S. *The Language instinct: The new science of language and mind*. London: Penguin Books; 1994.
- <sup>2</sup> Hart B, Risley TR. *Meaningful differences in the everyday experience of young American children*. Baltimore: Paul Brookes; 1995.
- <sup>3</sup> Ruben R, J. . *Redefining the survival of the fittest: communication disorders in the 21st century* *The Laryngoscope*. 2000;110:241-5.
- <sup>4</sup> Industry Skills Council of Australia Report. *No More Excuses: An industry response to the language literacy and numeracy challenge by the ISCs*. Surrey Hills, NSW: Industry Skills Council of Australia: 2011.
- <sup>5</sup> Snowling MJ, Hulme C. Interventions for children's language and literacy difficulties. *International Journal of Language and Communication Disorders*. 2012 //;47(1):27-34.
- <sup>6</sup> High PC, Donoghue E, English KL, Fussell J, Jaudes PK, Jones VF, et al. School Readiness. *Pediatrics*. 2008 //;121(4):e1008-e15
- <sup>7</sup> Ukoumunne OC, Wake M, Carlin J, Bavin EL, Lum J, Skeat J, et al. Profiles of language development in pre-school children: A longitudinal latent class analysis of data from the Early Language in Victoria Study. *Child: Care, Health and Development*. 2012 //;38(3):341-9.
- <sup>8</sup> Lonigan CJ. Development, assessment, and promotion of preliteracy skills. *Early Education and Development*. 2006 //;17(1):91-114.
- <sup>9</sup> Prior M, Bavin E, Ong B. Predictors of school readiness in five-to six-year-old children from an Australian longitudinal community sample. *Educational Psychology*. 2011 //;31(1):3-16.
- <sup>10</sup> Law, J. Rush, R, Parsons, S. & Schoon, I. (2009) Modelling developmental language difficulties from school entry into adulthood: Literacy, mental health and employment outcomes. *Journal of Speech, Language and Hearing Research* 52, 1401-1416.
- <sup>11</sup> Brownlie EB, Beitchman JH, Escobar M, Young A, Atkinson L, Johnson C, et al. Early Language Impairment and Young Adult Delinquent and Aggressive Behaviour *Journal of Abnormal Child Psychology*. 2004;32:453-67.
- <sup>12</sup> Hartshorne M. *The Cost to the Nation of Children's Poor Communication: Scotland Edition I CAN Talk Series - Issue 3.*: 2006
- <sup>13</sup> Trade Union Congress, *Cutting the Cost of Child Poverty*. TUC. Available at <https://www.tuc.org.uk/publications/viewPub.cfm?frmPubID=525> 2007 [cited 2013 01.02.2013].
- <sup>14</sup> Gregory J, Bryan K. Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties. *International Journal of Language and Communication Disorders* 2011;46:202-15.

- <sup>15</sup> Bryan K, Freer J, Furlong C. Language and communication difficulties in juvenile offenders. *International Journal of Language and Communication Disorders* 2007;42(5):505-20.
- <sup>16</sup> Grasping the nettle: early intervention for children, families and communities London: Centre for Excellence and Outcomes in Children and Young People's Services: 2010.
- <sup>17</sup> Snow PC, Powell MB. Oral Language Competence, Social Skills and High-risk Boys: what are juvenile offenders trying to tell us? . *Children & Society (Online Early Articles)* doi:10.1111/j1099-0860200600076x. 2007.
- <sup>18</sup> Snow PC, Powell MB. Interviewing Juvenile Offenders: The importance of oral language competence *Current Issues in Criminal Justice*. 2004;16(2):220-5.
- <sup>19</sup> Clark J. Perspectives of Enhanced Thinking Skills in Prisons in the United Kingdom: A Qualitative Case Study. *British Journal of Forensic Practice*. 2006;8(1):12-23.
- <sup>20</sup> Cross M. Language and Social Exclusion, I CAN Talk Series - Issue 4. 2007.
- <sup>21</sup> Irwin L, G. , Siddiqi A, Hertzman C. Early Child development: A powerful equaliser. Final report for the World health organisation's Commission on the Social Determinants of Health Vancouver: University of British Columbia.: 2007.
- <sup>22</sup> DeThorne LS, Petrill SA, Hayiou-Thomas ME, Plomin R. Low expressive vocabulary: Higher heritability as a function of more severe cases. *Journal of Speech, Language, and Hearing Research*. 2005;48(4):792-804.
- <sup>23</sup> Spinath FM, Harlaar N, Ronald A, Plomin R. Substantial Genetic Influence on Mild Mental Impairment in Early Childhood. *American Journal on Mental Retardation*. 2004;109(1):34-43+77.
- <sup>24</sup> Tucker-Drob EM, Rhemtulla M, Harden KP, Turkheimer E, Fask D. Emergence of a gene x socioeconomic status interaction on infant mental ability between 10 months and 2 years. *Psychological Science*. 2011;22(1):125-33.
- <sup>25</sup> 14. Turkheimer E, Haley A, Waldron M, D'Onofrio B, Gottesman I. Socioeconomic status modifies heritability of IQ in young children. *Psychological Science*. 2003;14(6):623-8.
- <sup>26</sup> Rowe DC, Jacobson KC, Van Den Oord EJCG. Genetic and environmental influences on vocabulary IQ: Parental education level as moderator. *Child Development*. 1999;70(5):1151-62.
- <sup>27</sup> Friend A, Defries JC, Olson RK. Parental education moderates genetic influences on reading disability: Research article. *Psychological Science*. 2008;19(11):1124-30.
- <sup>28</sup> Asbury K, Wachs TD, Plomin R. Environmental moderators of genetic influence on verbal and nonverbal abilities in early childhood *Intelligence* 2005;33(643-66). Epub  
Idoi:10.1016/j.intell.2005.03.008.
- <sup>29</sup> Roulstone S, Law J, Rush R, Clegg J, Peters T. Investigating the role of language in children's early educational outcomes. Department for Education: 2010.

- <sup>30</sup> Miser TM, Hupp JM. The Influence of Socioeconomic Status, Home Environment, and Childcare on Child Language Abilities. *Current Psychology*. 2012 //;31(2):144-59.
- <sup>31</sup> Campbell TF, Dollaghan CA, Rickette HE, Paradise JL, Feldman HM, Shriberg LD, et al. Risk Factors for Speech Delay of Unknown Origin in 3-Year-Old Children. *Child Development*. 2003 //;74(2):346-57. 22.
- <sup>32</sup> Reilly S, Wake M, Bavin EL, Prior M, Williams J, Bretherton L, et al. Predicting language at 2 years of age: A prospective community study. *Pediatrics*. 2007;120(6):e1441-e9. 23.
- <sup>33</sup> Henrichs J, Rescorla L, Schenk JJ, Schmidt HG, Jaddoe VWV, Hofman A, et al. Examining Continuity of Early Expressive Vocabulary Development: The Generation R Study. *J Speech Lang Hear Res*. 2011 Jun;54(3):854-69. PubMed PMID: WOS:000291166100011. English.
- <sup>34</sup> Hoff E. The Specificity of Environmental Influence: Socioeconomic Status Affects Early Vocabulary Development Via Maternal Speech. *Child Development*. 2003 //;74(5):1368-78.
- <sup>35</sup> Zubrick SR, Taylor CL, Rice ML, Slegers DW. Late language emergence at 24 months: An epidemiological study of prevalence, predictors, and covariates. *Journal of Speech, Language, and Hearing Research*. 2007;50(6):1562-92.
- <sup>36</sup> Hoff E. How social contexts support and shape language development. *Developmental Review*. 2006 //;26(1):55-88.
- <sup>37</sup> Close R. *Television and Language Development in the Early Years: A review of the literature*. National Literacy Trust: 2004.
- <sup>38</sup> Penn H, Barreau S, Butterworth L, Lloyd E, Moyles J, Potter S, et al. *What is the impact of out-of-home integrated care and education settings on children aged 0-6 and their parents?* London: EPPI-Centre, Social Science Research Unit, Institute of Education., 2004
- <sup>39</sup> Tomblin JB, Records NL, Buckwalter P, Zhang X, Smith E, O'Brien M. Prevalence of specific language impairment in kindergarten children *Journal of Speech & Hearing Research*. 1997;40(6):1245-60.
- <sup>40</sup> Locke A, Ginsborg J, Peers I. Development and disadvantage: Implications for the early years and beyond. *International Journal of Language and Communication Disorders*. 2002;37(1):3-15.
- <sup>41</sup> Law J, McBean K, Rush R. Communication skills in a population of primary school-aged children raised in an area of pronounced social disadvantage. *International Journal of Language and Communication Disorders*. 2011;46(6):657-64.
- <sup>42</sup> *The Bercow Report: A Review of Services for Children and Young People (0–19) with Speech, Language and Communication Needs*. Department for Children, Schools and Families. 2008.
- <sup>43</sup> Marmot D. *Fair society, healthier Lives; Strategic Review of Health Inequalities in England Post-2010* [www.ucl.ac.uk/marmotreview](http://www.ucl.ac.uk/marmotreview): The Marmot Review 2010 [01.02.2013].
- <sup>44</sup> ICAN. *Language and Social Exclusion I CAN Talk Series – Issue 4*. London: ICAN. 2007.

- <sup>45</sup> Allen G, Duncan Smith I. Early Intervention: Good parents, Great Kids, Better Citizens. London: The Centre for Social Justice and the Smith Institute., 2008.
- <sup>46</sup> Allen G. Early Intervention: The Next Steps. An Independent report to Her Majesty's Government. 2011
- <sup>47</sup> RCSLT. Speech and language therapists lament Graham Allen's 'missed opportunity' [http://www.rcslt.org/news/press\\_releases/2011/graham\\_allen\\_report](http://www.rcslt.org/news/press_releases/2011/graham_allen_report): Royal College of Speech and Language Therapists; 2011 [19.12.12]
- <sup>48</sup> Allen G. Early Intervention: Smart Investment, Massive Savings. The second independent report to Her Majesty's Government. 2011.
- <sup>49</sup> Hall D, M, B. Health for all children. 2nd edition ed. Oxford: Oxford University Press; 1989.
- <sup>50</sup> Law J, Boyle J, Harris F, A. H. Screening for speech and language delay: a systematic review of the literature. Health Technol Assess. 1998;2(9):1-184.
- <sup>51</sup> Nelson HD, Nygren P, Walker M, Panoscha R. Screening for speech and language delay in preschool children: Systematic evidence review for the US preventive services task force. Pediatrics. 2006 //;117(2):e298-e319.
- <sup>52</sup> Shribman S, Billingham K. Healthy Child Programme: pregnancy and the first five years of life. Department for Children, Schools and Families. 2009.
- <sup>53</sup> Shribman S, Billingham K. The Child Health Promotion Programme: Pregnancy and the First Five Years of Life. Department for Children, Families and Schools. 2008
- <sup>54</sup> Sure Start Childrens Centres <http://www.education.gov.uk/childrenandyoungpeople/earlylearningandchildcare/delivery/surestart/a0076712/sure-start-children's-centres2012>.
- <sup>55</sup> Rutter M. Is Sure Start an effective preventive intervention? . Child and Adolescent Mental Health. 2006;11:135-41.
- <sup>56</sup> Harris F, Law J, Roy P. The Third Implementation of the Sure Start Language Measure. 2005.
- <sup>57</sup> DH. Family Nurse Partnership Programme [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_118530](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_118530) [cited 2013].
- <sup>58</sup> Family Nurse Partnership <http://www.scotland.gov.uk/Topics/People/Young-People/Early-Years-and-Family/family-nurse-partnership/background2012> [cited 2013].
- <sup>59</sup> Barnes J, Ball M, Meadows P, Howden B, Jackson A, Henderson J, et al. The Family-Nurse Partnership Programme in England: Wave 1 implementation in toddlerhood & a comparison between Waves 1 and 2a of implementation in pregnancy and infancy. In: Health Df, editor. [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_1232382011](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_1232382011).
- <sup>60</sup> Giving Children a healthy start: Health Report. Audit Commission: 2010.

<sup>61</sup> Wilson P, Rush R, Hussey S, Puckering C, Sim F, Allely C, S,, et al. How evidence-based is an 'evidence-based parenting program'? A PRISMA systematic review and meta-analysis of Triple P <http://www.biomedcentral.com/1741-7015/10/1302012>.

<sup>62</sup> Law J, Garrett Z, Nye C. Speech and language therapy interventions for children with primary speech and language delay or disorder (Cochrane Review) (2007 update of the 2003 Review). To be published in: The Cochrane Library, Oxford: Update Software. 2013.

<sup>63</sup> Marulis LM, Neuman SB. The effects of vocabulary intervention on young children's word learning: A meta-analysis. *Review of Educational Research*. 2010;80:300-35.

<sup>64</sup> Ward S. The predictive validity and accuracy of a screening test for language delay and auditory perceptual disorder. *European Journal of Disorders of Communication*. 1992;27:55-72.

<sup>65</sup> St James-Roberts I, Alston E. Attention Development in 10-month-old infants selected by the WILSTAAR screen for pre-language difficulties. *Journal of Child Psychology and Psychiatry*. 2006;47(1):63-8.

<sup>66</sup> Alston E, St James-Roberts I. Home environments of 10-month-old infants selected by the WILSTAAR screen for pre-language difficulties. *International Journal of Language and Communication Disorders*. 2005 //;40(2):123-36.

<sup>67</sup> Ward S. An investigation into the effectiveness of an early intervention method for delayed language development in young children. *International Journal of Language and Communication Disorders*. 1999;34:243-65.

<sup>68</sup> Sutton L, Tapper L. Investigating WILSTAAR *Bulletin of the Royal College of Speech and Language Therapists*. 1999;August.

<sup>69</sup> Evans C. The Kenilworth project: a randomised controlled trial of WILSTAAR. Unpublished manuscript.

<sup>70</sup> Law J, Lee W, Roulstone S, Wren Y, Zeng B, Lindsay G. "What works": Interventions for children and young people with speech, language and communication needs. London: DfE2012

<sup>71</sup> Sharkey P, Elwert F. The legacy of disadvantage: Multigenerational neighborhood effects on cognitive ability. *American Journal of Sociology*. 2011 //;116(6):1934-81.

<sup>72</sup>Talking Time

[http://www.ioe.ac.uk/about/documents/About\\_Staff/PHD\\_JD\\_Publications\\_TALKING\\_TIME\\_Handbook.pdf](http://www.ioe.ac.uk/about/documents/About_Staff/PHD_JD_Publications_TALKING_TIME_Handbook.pdf) [cited 2013].

<sup>73</sup> Dockrell JE, Stuart M, D. K. 'Implementing effective oral language interventions in preschool settings: no simple solutions'. In: Ginsborg J, Clegg J, editors. *Language and Social Disadvantage: theory into practice*. Chichester: J Wiley; 2006.

<sup>74</sup> Dockrell JE, Stuart M, King D. Supporting Early Oral Language Skills for English Language Learners in Inner city Preschool provision. *British Journal of Educational Psychology*. 2010;80:497-516

<sup>75</sup> Nuffield Early Language Intervention Programme <http://www.ican.org.uk/en/What-we-do/Early%20Years/Nuffield.aspx> [cited 2013].

<sup>76</sup> Fricke S, Bowyer-Crane C, Haley AJ, Hulme C, Snowling MJ. Efficacy of language intervention in the early years. *Journal of Child Psychology and Psychiatry and Allied Disciplines*. 2012 //.

<sup>77</sup> Talk of the Town <http://www.thecommunicationtrust.org.uk/schools/projects/talk-of-the-town.aspx> [cited 2013].

<sup>78</sup> Heckman JJ, Rubinstein Y. The importance of noncognitive skills: Lessons from the GED testing program *American Economic Review* 2001;91(2):145-9.

<sup>79</sup> Lindsay G, Desforges M, Dockrell J, Law J, Peacey N, Beecham J. The effective and efficient use of resources in services for children and young people with speech, language and communication needs. Monograph. Nottingham: DCFS: 2008.

145. Marsh K, Bertranou E, Suominem H, Venkatachalem M. An Economic Evaluation of Speech and Language Therapy 2010.

146. Law J, Beecham J, Lindsay G. The effectiveness and cost effectiveness of interventions for children with Speech Language and Communication Needs Nottingham: DfE, 2012.

<sup>80</sup> Marsh K, Bertranou E, Suominem H, Venkatachalem M. An Economic Evaluation of Speech and Language Therapy 2010.

<sup>81</sup> Law J, Beecham J, Lindsay G. The effectiveness and cost effectiveness of interventions for children with Speech Language and Communication Needs Nottingham: DfE, 2012.