

Restoring Reading Deficits.

By Eddie Carron

It seems reasonable to blame teachers for the high level of illiteracy in English speaking countries but the reality is that it is the orthography of the English language that is to blame. The concept of blame is however, an unproductive one. It is more productive to seek to resolve the problem by understanding the causal factors and to focus research on finding a means of overcoming them. It is said that every problem is an answer in disguise and that is certainly true of restoring reading deficits.

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Chapter 1.

In this chapter, I will demonstrate that illiteracy in English speaking countries is a direct and inevitable consequence of the chaotic relationship between the letters (graphemes) and sounds (phonemes) in our written language.

It is an easily verifiable fact of life that in English speaking countries, schools only ever succeed in achieving functional literacy for about four out of five of their children quite irrespective of the amount of money spent on promoting literacy. At the outbreak of the second world war, it was discovered that in the UK, one fifth of the men conscripted into the army were unable to read the user instructions that accompanied the very dangerous munitions that they were expected to use against the enemy. One General is reputed to have said that he was often more afraid of visiting some of his own training units than he was of facing the Germans. In the following six decades, successive national governments in all English-speaking countries poured vast sums of money into finding a solution to endemic illiteracy in their respective countries. This huge investment resulted in large numbers of teachers undergoing additional training and emerging to form what is today, a vast army of educational specialists variously called educational psychologists, remedial advisory teachers, literacy specialists, literacy support assistants, special needs co-ordinators, consultants, directors of learning, remedial teachers and literacy teachers etc etc.

Additionally, a series of ill-conceived 'literacy initiatives' were imposed on schools by relevant government departments. These 'initiatives' were based on nothing more than the 'good ideas' of the whiz kids who had floated to the top of this army of ineffectual 'literacy experts.' These 'initiatives' had inspiring names but they all failed to make any impact on literacy attainment perhaps because the one thing they all had in common was that, although they frequently used comments such as 'evidence based' and 'research projects' they had no basis in any valid academic research and were consequently, unproven. Almost inevitably, this vast investment of tax-payers money produced no literacy improvement whatsoever. At age 11.5, UK compulsory national tests show that one child in five still fails to achieve the required standard in reading and other literacy skills. A well funded, European-wide study in the year 2000 confirmed that in the UK, one person in five was unable to read the dosage instructions on a child's medicine bottle. Literacy in English speaking countries generally remains consistent at around 80%. Literacy in Puerto Rico, by comparison, is consistently around 97%!

The majority of children do of course reach the required standards in literacy no matter which initial teaching strategy they were exposed to. However, the minority who fail to achieve functional literacy by the age of sixteen is a very substantial one, numbering as it does, hundreds of thousands of less than functionally literate school leavers every year. Hard evidence provides the clearest possible indication that many

of these children will not only contribute little or nothing to their national economies but go on instead to become a burden on their societies and that it will be from this group that future prison populations will largely be drawn. High levels of sickness, absenteeism, depression and other stress related illnesses demonstrate that in English speaking countries, teaching is one of the most demanding and stressful of all jobs. My own personal research suggests that at least some of this stress stems from teachers' awareness of their own inability to properly discharge their professional responsibilities to those who are failing to learn to read. Many of the other stressful situations in teaching are generated by those very children who have been failed by the system as far as the delivery of literacy is concerned.

It is beyond dispute that other European countries are far more successful than the UK or any other English speaking country at teaching their children to read. In Finland children do not start school until they are 7 and the amount of Education spending on each child is less than that spent in English speaking countries generally. Their class sizes are often greater than those in other countries, yet Finland consistently tops the world literacy league tables. For the past decade, much to the embarrassment of the Finnish educators, thousands of teachers who the Finns call 'Education Pilgrims' have flocked to Finland to find out how they consistently achieve such high standards in literacy. They discover that teachers in Finland have no unique teaching strategies and are no better paid than teachers in other European countries. In fact, Finnish are free to teach any way they want. Each teacher can choose whichever textbooks they wish to use or none at all. They can teach indoors or outdoors and cluster children in small or large groups entirely at their own discretion. Researchers are also surprised to find that in Finland, teaching is a high status job with about forty applicants for every teaching vacancy.



Finnish school children in their first year of school.

Whatever the solution to the problem of illiteracy, it is clear that the problem will not be solved by adopting any of the teaching strategies used in Finland or in any of the other countries with a more successful track record in literacy or by investing in further, unproven 'remedial' teaching initiatives. The invariably ignored but highly significant fact that teachers in the US, Canada, New Zealand and Australia and all other English-speaking regions are no more successful than teachers in the UK at teaching all of their children to read, is the best possible evidence that the problem lies in the English language itself and not in the particular teaching methodology.

Another highly significant but consistently overlooked aspect of this problem is the self-evident lack of professional progress in literacy teaching when compared with the vast progress made in other professional disciplines over the past six decades for which statistics are available. In medicine for example, hearts and other major organs are now routinely transplanted from one person to another and diseases which were once a death sentence are now cured as a matter of course. The human genome has been successfully sequenced and life expectancy has increased by about a decade! Almost every home has a computer with the kind of computing power that would have been unimaginable six decades ago. Children using their mobile phones in the school playground in the remoter parts of Scotland can carry on a conversation with a friend drinking coffee in Starbucks in New York. Science has provided us with gadgets in our cars which can direct us to any point on the planet and yet one child in

five in every English speaking country still leaves school less than functionally literate. Why? Where is the parallel progress in the promotion of literacy in English speaking countries? Where is the return on the massive investment in securing literacy for all children made by successive national governments in every English speaking country in the world?

The Americans spend about five billion dollars annually in public assistance for people who are unemployable due to illiteracy. More than seventy million US citizens read below the level needed to function successfully according to Jonathan Kozol, the author of a book entitled 'Illiterate America.' In 2006, CBC news in Canada announced the findings of research which showed that in total, some 40 per cent of Canadians are only semi-literate and that even when new immigrants were excluded, the numbers remain pretty much the same. This report also commented on the static nature of the situation. A survey in Australia carried out as part of an international literacy survey focused on children in Years 3 and 5 found that on average, 28% of pupils failed to meet the required standard in reading and writing skills. New Zealand also took part in the same survey and produced results similar to those in Australia and the UK. It is an indisputable fact that much higher levels of literacy are routinely achieved in non-English speaking countries and it is equally true that these countries spend no more, and in some case even substantially less, on teaching than the English speaking countries. Research also confirms that countries with a better track record in securing literacy for all of their children, do not use any substantially different teaching strategies from those countries which fail to match their literacy achievements.

It has been calculated that in learning to read English, there are almost four thousand words which are so phonetically illogical that their pronunciation can only be guessed at by aspiring readers. The inevitable conclusion must be that written English is in some respects, a more difficult language to learn than languages which have a completely regular, alphabet-based orthography. Most children succeed in learning these thousands of 'special cases' intuitively, during subsequent successful reading experience. Unfortunately, about 20% cannot so readily absorb this avalanche of 'special cases' and conventional teaching strategies are not able to deliver the quantity of successful reading sessions which are necessary to secure their internalisation. For this substantial minority, reading is a consistently confusing pattern of hesitations and contextual guesses which only serves to erode their self-confidence and makes assimilating the 'special cases' an even more distant prospect. At the extremes of the literacy debate, a view has gained currency in the past five years or so that all of these 'special cases' can be learned by all children by assimilating a fixed set of 'rules' in nursery and infant classes. The large numbers of head teachers who have succumbed to pressure to follow this unproven, logic-defying theory in the past five years or so have inevitably been finding that the normal distribution factor still applies and that national tests at 11 years of age are still

confirming that this illogical philosophy continues to condemn one fifth of all children in English speaking countries to a lifetime of illiteracy.

One solution to the problem would of course be to move over time, to a situation in which each of the forty-four speech sounds (phonemes) in English was represented by a single grapheme (letter or letter group) as it is in the Finnish language. We could start perhaps with the establishment of an 'International English Academy' with a brief similar to the Academie Francais and the task of looking after the national language. We could follow the German example and introduce the changes slowly, a few at a time starting with substituting the Greek 'ph' grapheme with the 'f' for all 'f' sounds. There is ample, clear evidence that such an approach would in time, resolve the problem of illiteracy completely and there is already considerable support for such an idea.

It should be remembered that the notion of a 'correct' spelling for every word in English only came into fashion after the publication of Ben Johnson's dictionary in the seventeenth century. Before this, the way words were represented in text was a fluid, developing phenomenon and in countries which did not have the 'advantage' of a dictionary, this development continued towards a more regular, phonetic model. The emergence of a widely accepted dictionary had the effect of fossilizing the way words were spelled. It is because this fossilization took place before English orthography had the opportunity to mature to the logical conclusion of phonetic regularity that spelling standards are so poor in all English speaking countries. The wide acceptance of Johnson's dictionary in academia meant that academics insisted that there could only be one 'correct' spelling for each word. Mark Twain asserted "*I don't give a damn for any man that can only spell a word one way!*"

. It was thought by the contemporary literati to be more 'scholarly' if spellings reflect the national origin of a word rather than its sound and since English is largely made up from other languages, this has been a disaster for millions of people. It is possible to observe the same thing happening in some European languages. The French talk about 'le weekend' and the Germans 'die Housewife'! The Swedes at least have the good sense to ensure that any words they borrow from other languages are adapted to their own pronunciation system. Linguists generally abhor the degradation of their own languages with foreign words but seem powerless to stop it. Using the system of pronunciation of other countries is entirely illogical since words are sounds and not representations of sounds as some, including many teachers, perceive them. The likelihood of English being regularised is however, very remote indeed. In a democracy, the will of the majority tends to prevail and the vast majority of people have no great difficulty in coming to terms with the illogical nature of English spelling. They tend to disregard the vast social and economic implications of such high levels of illiteracy which they perceive as a failure of the Education system and are content to heap opprobrium on teachers whose public standing in the community continues to decline. Interestingly in countries which have very regular orthographies

and which are inevitably much easier both to teach and to learn, teachers are held in much higher regard.

The fact is that there is very good correlation between the degree of regularity and consistency in the sound-symbol relationship and national literacy attainment. In Finnish for example, correspondence between graphemes and phonemes is absolute. Every sound (phoneme) is represented by one letter or letter group (grapheme) only and that grapheme exclusively represents that one sound and no other: Finland routinely achieves 98.5% literacy. The situation in other European languages is similar with only a few exceptions to the rule that one phoneme is represented by one grapheme and that grapheme represents that one sound and no other. In English the situation is very different. Consider just one of the many examples of the chaotic relationship between graphemes and phonemes in English. The 'oo' sound (phoneme) is represented by the grapheme 'oo' as in moon, by 'oe' as in shoe, by 'ue' as in glue, by 'ew' as in flew, by 'ough' is in through, by 'ou' as in could, by 'u' as in full, by 'u-e' as in rude or 'wo' as in two, by 'ui' as in fruit and so on. To further confuse the issue, these same graphemes also represent other sounds in other words! The same complex set of correspondences is repeated in every vowel sound, long and short, and there is a vowel sound in every syllable of every word so that these confusing, rule-defying letter/sound correspondences occur very, very frequently. It is a very simple matter to show that even the very poorest readers have difficulty with the vowel sounds but none at all with the consonant sounds. The reason for this chaotic arrangement lies of course in the varied origins of the English language which is not the product of a single culture built up over many centuries but the synthesised product of many cultures. To spell in English is to navigate a maze of Greek, Latin, German, French, Saxon and Celtic. Our language is bound up with our historical heritage and the chaotic nature of its orthography is the price we pay for the richness of our language and our history. Endemic illiteracy is also part of that price. It is difficult for teachers in English speaking countries to grasp the fact that in countries where the orthography is regular, spelling is not a significant Educational issue.

It is clear that the reason for the consistently high levels of illiteracy in all English speaking countries has nothing to do with poor teaching or a lack of funding. The problem is the complexity of English orthography viz. the relationships between its graphemes and phonemes. Regularizing these relationships would almost certainly result in a twenty percent increase in the number of literate English speakers who are otherwise destined to become a burden on their societies. Trying to change the absurdity of the grapheme-phoneme relationships is about as likely to succeed as King Canute was when he ordered the incoming tides to retreat. If we are serious about wishing to achieve universal literacy in the *lingua franca* that is English we have to accept the reality that the stumbling block to achieving this goal is neither the incompetence of our teachers, the stupidity of our children or the failure of governments to provide sufficient finances. The culprit is the chaotic relationship between the sounds that make up the words in English and the particular letters or

letter groups which we choose to represent them. Decades of experience have taught us that about one fifth of children in all English speaking countries will always fall significantly behind the majority of children in mastering these relationships if we persist with conventional teaching strategies which experience has taught us are bound to fail these children.

The question as to why some 80% of children do manage to assimilate all of the complex grapheme-phoneme correspondences and about 20% do not is one which has never been properly addressed by educators. There has been more or less general acceptance of the assumption that those who fail to acquire fluent reading skills are generally less able than their more fortunate peers. The fact that some highly gifted and successful people including Hans Christian Anderson, Albert Einstein, Agatha Christie, Winston Churchill, Leonardo Da Vinci, Charles Darwin, Walt Disney, Thomas Edison, Michael Angelo, Picasso, Nelson Rockefeller, Mark Twain, Vincent Van Gogh and many, many more had enormous difficulty in learning to read must surely put paid to that argument. It is perhaps self-evident that the effectiveness of memory has a part to play yet poor readers seem to be able to remember all the other significant things in their everyday lives just as readily as good readers. It would appear that there is something specific about internalising entirely illogical grapheme-phoneme correspondences that is at the heart of the problem.

Dyslexia or ‘word blindness’ is often proposed as an explanation for the high levels of illiteracy which are experienced in English speaking countries to the extent that there is now a thriving, and for some, very lucrative international dyslexia industry. Some of the websites offer commercial products using what they describe as ‘evidence– based’ remedial strategies which are ‘guaranteed’ to overcome the problems of dyslexia. They either claim or imply that the underlying causes of the dyslexic condition are physical and associated with either visual or auditory perception anomalies which occur consistently in all populations. When researching the content of this book, I asked a number of published authors who market ‘guaranteed’ materials for dyslexics if the condition was exclusive to English speaking countries and if not, why did it not present any difficulties to children in Finland or Puerto Rica or other European countries in learning to read. Not one replied. There is no doubt that the dyslexic condition occurs in all populations but the reality is that in those countries where the language is phonetically regular, it presents no significant barriers in learning to read. This is not opinion. It is an indisputable and easily verifiable fact which no-one in the dyslexia industry wants to acknowledge. University professors in the UK and the USA find that children with significant reading deficits are simply stuck at the level of younger children and are failing to make progress because they are not getting the routinely successful quantity of reading practice that is essential to the internalisation of the many anomalies in English orthography.

One difference shared by the majority of those with significant reading deficits is less effective functioning of Short Term Memory (STM). This has been largely

overlooked because of the relatively simplistic tests that are used in schools as part of general IQ assessment. The emergence of more sophisticated test instruments for the measurement of STM supports the notion that those whose STM function is below the twentieth percentile will experience difficulty in coming to terms with irregular grapheme-phoneme correspondences. Short Term Memory acts as a guardian to longer term memory by filtering out and discarding irrelevant or unwanted data from the stream of visual and auditory images which constantly assault our senses. STM is able to store incoming visual and auditory images for a short time only before they are either discarded or passed to longer term memory. A poorly functioning STM might store incoming data for a few seconds only, while averagely functioning STM might retain it for a few minutes before it is discarded as worthless. It is postulated that poor STM functioning is a major handicap to acquiring good decoding skills. Patterns of normal distribution suggest that as far as acquiring reading skills is concerned, those with STM functioning below the 20th percentile will need considerably more experience of a particular, irregular grapheme-correspondence before it can acquire the reflexive quality that is essential in reading. Poor short term memory function is a neurological weakness but in an area which is malleable and responsive to the environment.

Inevitably, there will be a similar proportion of children in all populations whose short term memory function will be in the lowest twenty percent but this does not appear to prevent the assimilation of any orthography where the grapheme-phoneme correspondences are regular and absolute as they are in Finnish and other European languages.

The whole point of an alphabet-based orthography is that the letters of the written alphabet should evoke the sounds that are needed to recreate words. In most languages they do precisely that and consequently, these countries enjoy virtually complete literacy. In English speaking countries the relationship between the letters of the alphabet and their corresponding sounds is a chaotic mess. Consider the fact that in the word 'donkey', the 'donk' is voiced as 'donk' but in the word 'monkey', the 'monk' is voiced as 'munk'! There are no 'rules' that can explain such anomalies; nor can they be accommodated within a limited range of 'exceptions' because these 'exceptions' would exceed any norm even if such a decoding norm could be postulated. A result of these bizarre correspondences, one person in five is left functionally illiterate.

In summary therefore, I propose that the orthography of regularly phonetic languages such as Finnish can be easily internalised by learning a set of consistent, unchanging rules but that English, with its thousands of anomalies, poses significant difficulties for about one fifth of the populations of all English speaking countries. If we are to make significant inroads into the problems of illiteracy in English speaking countries, this fact must be taken into account in the teaching of reading. I would be happy to respond to any constructive challenges or criticism of this proposal at eddiecarron@btconnect.com

Chapter 2.

In the nineteenth century, Noah Webster a US educator and politician, in response to a recognition of the negative economic implications of the illogical English language orthography advocated simplified spelling. Webster disliked the pedantic approach of the educational establishment in England and some of the changes he introduced are now an established part of the US English orthography. These changes are too few however, to impact significantly on literacy attainment in the US but they do indicate a recognition of the impact of an illogical orthography. Documents from the late eighteenth century up to the 1820's establish that Webster's brilliant "sound" method speller was not only massively used for beginners in America from 1783 to 1826, but was unflinching successful in curing the "disease" of illiteracy.

Starting with the assumption that endemic illiteracy in English speaking countries can be explained by the complex and illogical nature of English language orthography, I now propose to examine and expose in some detail, the nature of the reading process itself and seek to dispel some of the misconceptions about this process that are common in the teaching profession!

In spite of the chaotic and seemingly bizarre relationships between the graphemes and phonemes in English, there is no avoiding the fact that four out of five children in every English speaking country, do nevertheless succeed in learning to read although spelling remains a significant challenge for many who would otherwise be regarded as literate individuals. Most people absorb all of the illogical grapheme phoneme correspondences quickly and effortlessly, not by superiority of intellect nor by having been taught an exhaustive set of rules but intuitively, within the experience of reading itself. For such children, the skill of responding appropriately to each grapheme during the acquisition of reading skill becomes a reflex reaction and the correct phoneme, however illogical, is evoked automatically. As our internalised visual store of text words expands, we acquire a personal, instantly available reference database for decoding any unfamiliar words we encounter in subsequent reading. Once reading skills become established, experience raises these skills to a higher level at which the reader responds reflexively, not to individual graphemes but to the text words as a whole. The phenomenon of reflexivity or subconscious reaction, is a feature of all skills acquisition. It is just as true of knitting, driving and typing as it is of reading. By the age of thirteen or so, every competent reader has encountered all of the frequently occurring words many thousands of times so that a point is reached at which individual graphemes are perceived only in less frequently occurring words. At least eighty five percent of the words in any passage are perceived by competent readers as familiar, individual text words or discrete visual images and responded to as such, reflexively without grapheme by grapheme decoding. Poor readers lack this quantity of successful word encounters and consequently, have a much smaller,

internalised reference database of text words and are likely only to perceive one or two percent of the words in a passage as discrete, familiar images.

Consider the very common word 'enough'. When it is first encountered as a text word, the word could just conceivably be deduced in some texts by contextual guessing but there is no conceivable means by which it could be vocalised solely by analysing its graphemes. At some point someone would have to tell the aspiring reader that e-n-o-u-g-h did indeed represent the word 'eenuff'. Most aspiring readers might internalise that fact after encountering the word once or twice. Pupils with limited duration short term memories might require one hundred or more successful encounters before the word was admitted into longer term memory as a discrete visual image. The chances of poorer readers securing that many successful encounters of the word 'enough' in the course of their limited reading experiences is remote indeed; there is of course, no way that they could ever deduce it by its grapheme-phoneme correspondences alone.

The reflex nature of the competent reader's response to text, because it does not involve any thought process, leaves the brain free to focus on and assimilate the meanings of the words, reflexively and sub-vocally created during the reading process. The poor reader at age thirteen has acquired only a slightly greater quantity of successful text-word encounters than he or she had acquired at the age of nine and consequently makes little or no more progress towards the point at which the grapheme-phoneme response becomes reflexive. Additionally of course, the daily dose of reading failure which is the inevitable lot of the poor reader, undermines pupils' confidence in their own ability to learn to read and the consequent loss of self-esteem creates a further barrier to their progress in this key area of literacy.

Its varied historical origins have endowed the English language with a phenomenal richness as a means of expressing ideas but they have left us with more than one hundred and twenty different graphemes or ways of representing just forty-four phonemes or speech sounds. There is no phonetic logic in using the 'ough' grapheme in the word 'enough' or the 'ph' grapheme in the word 'graph' etc. They owe their existence to their geographic origins and have logical, phonetic validity in the language of their origins but none at all in English..

In the dawn of time, as man emerged from the primeval swamp, human beings uniquely, by altering their breathing patterns, developed specific sounds to represent particular ideas and these sounds form the vocabulary of what we now call language. Different languages developed in different regions of the world because of a lack of communication between these widely separated communities. With the development of the printing press and the proliferation of printed text, it became common practice to think of words as the things that appear on the pages of books but of course they are not. It is important to remind ourselves that words are sounds and therefore they can only be heard and not seen. What we see in books is text or the graphical symbols which represent the sounds of words. When we 'read', the graphemes in each unit of

text automatically generate the corresponding phonemes and 'words' are recreated in the mind of the reader. It is only then that understanding of the text can occur. Several decades ago, while researchers in a technology institute in the US were investigating the reading process, they discovered that reading is nothing more than a kind of sub-vocal speaking! They made this discovery by attaching sensors close the vocal cords of students and recording their responses while they were silently reading passages of text. When the recordings were amplified and replayed, the result was not only speech but speech with the regional accent of the reader! This is proof positive that part of the reading process involves sub-vocally speaking the texts we are reading.

When poor readers attempt to read a line of text, this reflex reaction to the graphemes does not take place because they have not acquired the intuitive appreciation of all of the complex grapheme-phoneme responses which can only result from a significant quantity of productive reading experience. In languages such as Finnish, where there is absolute one-to-one correspondence between graphemes and phonemes, the reflex reaction appears to develop much more readily than is the case in English where the correspondences are chaotic. For this reason, English speaking poor readers' attempts at reading always involve a conscious, two stage thinking process. Firstly they have to actively and consciously sound out individual graphemes in order to attempt to perceive each word before they can begin to understand the meaning of whatever words they are able to reconstitute. Secondly, they have to assimilate the meaning of these words. It is usually possible to either hear poor readers trying to reconstitute words during their reading attempts or at least to see their lips moving in their sub-vocalising efforts. This is a very laborious, unproductive and unrewarding process because it severely limits the poor reader's access to the intellectual content of what is being read. It is hardly surprising that those who find reading a self-confidence destroying chore, are put off reading, sometimes for life, by inappropriate teaching methods.

That educationalists have not succeeded in making any significant improvement into our awful literacy statistics in the past six decades, is due in large part to their failure to have produced an agreed professional definition of what reading is and what is involved in the reading process. The reality in the classroom is that teachers of reading are left to devise their own individual, idiosyncratic perceptions of what reading is and every author in the vast body of literature on the subject has to include their own definition of reading in order to make any sense of what they are saying. The main difficulty which this produces is the fact that productive, professional communication with others is well nigh impossible because those seeking to exchange ideas are frequently talking about entirely different things. It is also a sad reflection on the teaching profession that there is no clear route from research to practice. Can you imagine the chaos that would result if a similar situation prevailed in medicine and each general practitioner was left to define each medical condition in his or her own idiosyncratic way and indeed to legitimately prescribe whatever he or she believed to be an appropriate remedial strategy without any basis in valid research. It is a

regrettable fact that Educationalists have long favoured a medical model of reading disability involving diagnosis, prescription and cure. The remedial literacy industry has no shortage of diagnoses or prescriptions but offers no cures whatsoever! The medical model should be consigned to history because it consistently fails to produce the 'cures' which it implies are possible.

An author's ideas are generated in his or her imagination and expressed in the form of 'words' which they transcribe onto paper in the form of the textual representations of these words. The writer encodes his or her thoughts in a form that readers can decode and so experience similar thoughts. Readers have to recreate these words in their own heads before they can begin to assimilate the author's ideas. This process which we call 'reading' inevitably involves either the vocal or the sub-vocal recreation of the words which the author recorded as text. Reading used to be thought of as simply the decoding process viz. the process of reproducing the sounds or 'phonemes' corresponding to the letters or graphemes in the individual words. This notion fell into disrepute because it excluded the notion of comprehension as being part of the reading process which it self-evidently is. One definition of reading which has wide currency is that reading is '*the retrieval and assimilation of the intellectual content of text*'. This definition suggests that the process involves two separate functions viz. the 'retrieval' or decoding of the text into the sound of the words and the 'assimilation' of their meaning. Decoding or expressing the sounds corresponding to the graphemes in words is a practical skill and not a cognitive or intellectual function.

The fact that decoding text is a skill as opposed to an intellectual process, is very important because it is much easier to influence the acquisition of a skill than it is to influence the comprehension process. We know that skills are acquired by practice alone and that given a particular quantity of practice, they become reflex reactions ie. they are stimulated and activated without engaging or placing any demands on cognition or thinking process. Just as skilled drivers operate their vehicles unconsciously while their minds are engaged elsewhere, experienced readers unconsciously 'decode' text into sub-vocalised words while their minds are engaged in assimilating the cascade of unfolding meanings from the continuous stream of decoded words.

Children between the ages of six and nine with average reading skills will have encountered about one million text words. Since their reading vocabularies encompass only a few thousand words, this vast number will necessarily involve two or three hundred experiences of decoding each of the more frequently occurring words. This quantity of decoding experience is more than sufficient to account for their reflex reaction to most text. Equally the absence of this quantum of successful exposure to text, fully accounts for the failure of poor readers reactions to have become the automatic, reflex reaction which is an essential part of the reading process. Poor readers are locked into a cycle of failure. In the three years between the ages of six and nine when their reading skill should be developed and refined, they might

encounter each of the more frequently occurring text words only five of six times. In other words, they will only accrue between two and five percent of the number of encounters of their more fortunate peers and their reading will inevitably be a fairly unproductive, disjointed, negative experience. They need to acquire a higher level of successful exposure to text if their reaction is to become a reflex one. Unfortunately however, their failure to have acquired fluency in the fundamental grapheme-phoneme correspondences denies them access to the necessary level of appropriate experience. To better understand this process it is important to have universal agreement as to the nature of the reading process. The question to which teachers must find a common response is therefore. “What is reading?”

Whenever I led a discussion group on the subject of reading, I always asked teachers to anonymously write down their own personal definitions of the reading process on a scrap of paper. The words “*Reading is . . .*” appeared on the paper and teachers were asked to complete the sentence before taking their seats. Towards the end of the session I would always select a few of these pieces of paper randomly from the pile and read them aloud to the group, simply to highlight the wide range of different perceptions of what reading is which exists among teachers. This experience convinced me that the lack of a common, professional definition of reading is a significant part of the problem and goes some way to explain the persistence of illiteracy in English speaking countries. Surely the notion that children in English speaking countries are somehow less intellectually competent than children in countries that routinely achieve virtually one hundred percent literacy has no basis in reality

The reader.



Consider this lovely, evocative statue of a child reading. Imagine then a child lying on a settee in a family living room, totally immersed in a book and wholly unaware of all the noise and activity that would be the norm in most households.



The reader.

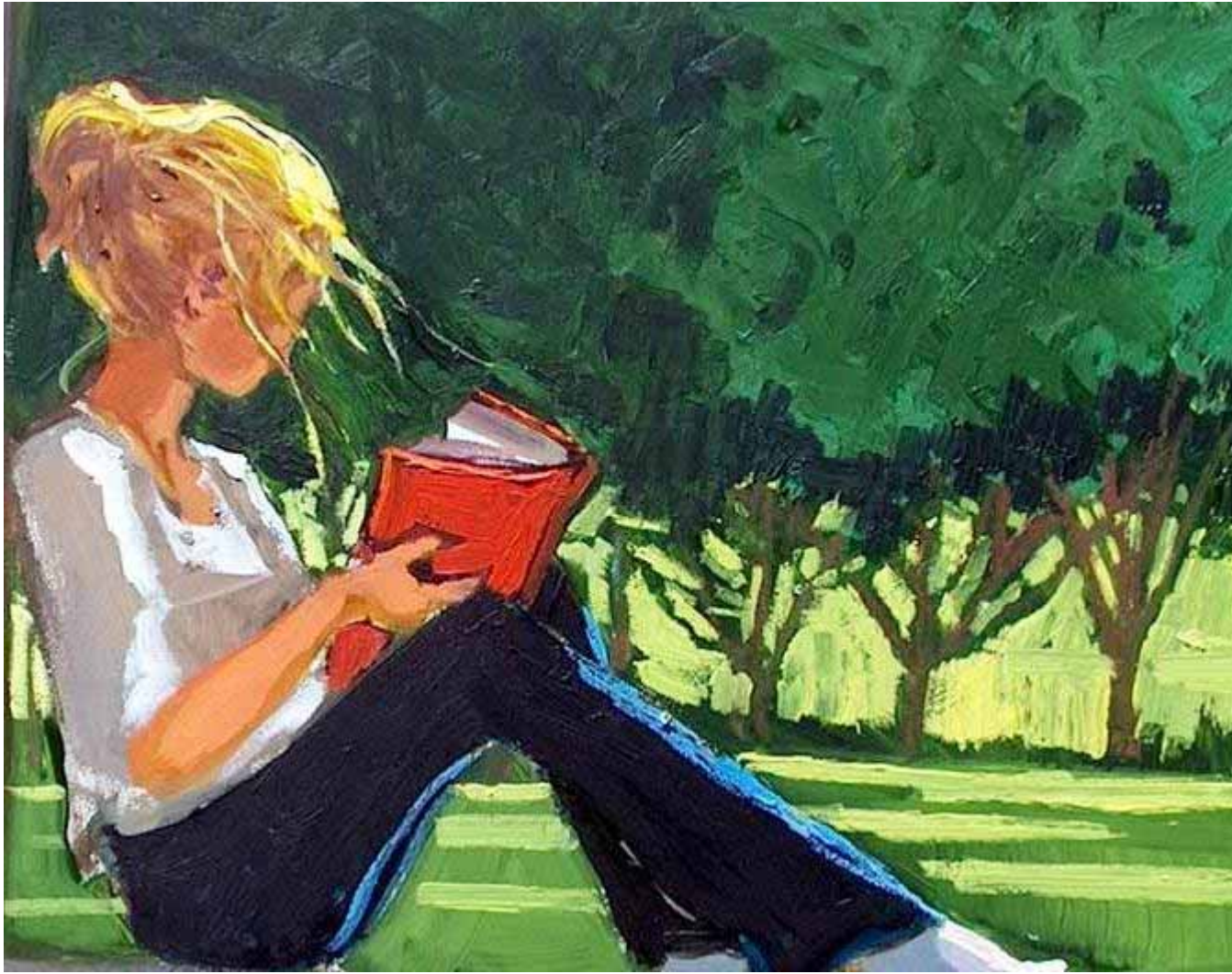


Consider also this girl sitting in a railway compartment reading her magazine and oblivious to the distractions of movement and sound within the busy commuter train as it carries her home.

These examples clearly demonstrate that reading has the following attributes:

1. It is a silent activity. No sound is generated during the act of reading. You cannot hear people reading!
2. It is an asocial activity involving only a single person. When another person impinges on the reading activity, reading ceases. It is not possible to read something while interacting with another human being.
3. It is a psychologically receptive activity. During the act of reading, the brain is in receptive mode, able to receive and assimilate the meaning of the text as it is being reflexively decoded into sub-vocal speech.
4. It is a two part process. The first part is decoding the text words into sub-vocalised words or 'thought speech' encoded by the author. The second part is the assimilation or comprehension of these words.

Reading in any environment is inevitably anti-social!



By definition therefore, reading is a silent, anti-social, receptive activity and it follows that by definition, any activity which is not silent and not anti-social and not receptive cannot be reading. The significance of these undoubted attributes lies in the fact that many teachers have come to regard 'reading' and 'reading aloud' as being one and the same process when they are self-evidently and very importantly, different and in some respects, quite opposite activities. Compare the attributes of the 'reading aloud' process:

1. **Reading aloud** unlike reading, is a vocal activity. Sounds in the form of audible words are generated and expressed in the reading aloud process.
2. **Reading aloud** unlike reading, is a social activity involving as it does, an audience to listen to the vocalised speech, even when that audience consists of only one person or indeed, when the reader is indeed, also the reader.
3. **Reading aloud** unlike reading, is a psychologically expressive activity whereas reading is the precise opposite viz. a 'receptive' activity. During the reading aloud activity, the

meaning of the words represented in text are actively communicated as opposed to being simply 'assimilated'.

4. **Reading aloud** is a multi-stage process involving as it does, the essential decoding and assimilation of the meaning of the text followed by its communication to others as speech.

Reading aloud is a different activity.



From these facts, it is self evident that 'reading' and 'reading aloud' are two quite different activities and the distinction is important in arriving at a common understanding of the reading process. We should recognise that it is a contradiction in terms when we say to a child as we often do, "Bring your book. I want to hear you reading!" It is simply not possible to 'hear' someone reading. The reading process is sub-vocal and therefore silent. Poor readers are those whose decoding skills have not yet reached the reflexive state which is essential to leave the mind free to assimilate the meaning of the words. During their attempts at reading, their thinking processes are consciously engaged with the decoding process which has not yet become a reflex reaction to the text words.

For the purposes of this publication at least, I propose that reading is defined as '*the retrieval and assimilation of the intellectual content of text.*' I suggest that the 'retrieval' component is a skill and therefore responsive to practice and that the 'assimilation' component is an intellectual process. I further propose that a deficit in reading skills is simply a deficit in the quantity of decoding experience to which the child has been exposed. Fundamentally, my view is that '*all that it takes to make a good reader is lots of successful reading experience*' because it is only within the experience of reading that all of the complex and sometimes illogical grapheme-

phoneme correspondences can be internalised and that ultimately, the ability to perceive and respond directly to words as discrete visual images can be achieved. To deliver one hundred percent literacy in English speaking countries, it is not necessary to change the illogical orthography of the English language. The fact that eighty or so percent of children cope with its complexities without apparent difficulty, only suggests that we need a different approach for children for whom these complexities seem insurmountable. For the most part, poor readers have no difficulty with the English language itself. It is only its orthography that defeats them. It is not uncommon to find people who are completely bilingual who have no difficulty in reading their native language but who experience enormous difficulty in learning to read English!

What teachers need is a means of ensuring that children whose reading is falling behind are able to enjoy a successful reading session every day in order to guarantee them a quantity of decoding experience, sufficient to ensure the assimilation of the more obscure grapheme-phoneme correspondences. **I believe and my practical research has demonstrated many times over, that restoring virtually any child's reading deficit is simply a matter of increasing the quantity of successful reading experience to which the child is exposed.** When a teacher tells a child that particular graphemes correspond to particular sounds, that information belongs to the teacher. When a child learns intuitively from personal experience, that particular graphemes correspond to particular sounds, that information belongs to the child and is infinitely more valuable for that reason.

Teachers can only ever hope to achieve universal literacy in English speaking countries if they adopt a more professional approach to their teaching. Firstly they must be agreed about the nature of the reading process and base their teaching on an agreed definition of the word 'reading'. We know that good spellers are not good spellers because they have been proactively taught all of the spelling rules but because they are able to recognise what the correctly spelled word looks like. They do this by referring to a visually internalised database of correctly spelled words. They have learned all of the grapheme-phoneme correspondences subconsciously within the reading experience. Beyond this we need to recognise that good reading skills are not the consequence of having consciously internalised every conceivable grapheme-phoneme correspondence in the orthography of the English language. Reading skills are a natural consequence of a having encountered each of the text-words in their reading materials, hundreds if not thousands of times before and it is within this experience that their readings skills have been finely honed to a point at which they have become a reflex reaction to text.

Acquiring the necessary level of reflexive competence with the grapheme/phoneme correspondences in most languages is a relatively simple matter because this correspondence in most languages is both consistent and exclusive. In the English language however, the grapheme-phoneme correspondences are neither consistent nor exclusive, making the necessary level of reflexive competence more

difficult to achieve. Tests show conclusively that even the most disadvantaged readers master the consonant correspondences with little difficulty and that their problem lies with the acquisition of the constantly varying vowel grapheme-phoneme correspondences. Words are collections of one, two, three, four or five syllables and each syllable is formed around a vowel sound. In English exclusively, these vowel sounds are themselves unchanging but are represented by a bewildering variety of different graphemes. The sole purpose of graphemes is to represent particular sounds yet in English, that simple uncomplicated logic is stood on its head because almost exclusively in English, graphemes have acquired additional geographical, cultural and historical connotations.

Another interesting fact about the reading process is highlighted by Stanislas Dehaene in his most recent work, 'Reading in the Brain.' He makes the point that reading has only been around for about 5000 years while the brain in its present form has existed for about 200,000 years. This led him to consider firstly, what part of the brain is centrally involved in the reading process and secondly, what function did that part of the brain perform prior in all the many thousands of years before it was used for reading. Magnetic resonance imaging provided the answer to both questions. The area used for reading is the same in all brains and it is the part of the brain that evolved in the first instance to provide the level of visual acuity needed to follow footprints and track animals, an important survival skill. This part of the brain deals with line, edge and curve detection. There is a highly vocal school thought that no matter how many hundreds of thousands of times we encounter a word in text, before we can recognise it, we always decode it letter by letter. Dehaene's work challenges this notion. In languages such as Chinese or Japanese, each character is a discrete visual entity and the same detection process recognises whole words instantly as discrete visual objects.

In summary therefore, I propose that there are two components in the reading process. There is the 'retrieval' component and the 'assimilation' component. I suggest that the 'retrieval' component is a skill and that as such, it must necessarily respond to a series of routinely successful practices. Given a sufficient quantity of successful practice, reading skill will develop to a point at which it becomes a reflex reaction to text. What teachers require for those who fail to acquire reading skill at the same rate as the majority of their peers, is a means of ensuring the delivery of a quantity of successful reading experience that is sufficient to ensure the progressive development of the 'retrieval' skills. Providing teachers with precisely such a means is the focus of the next chapter.

I would welcome any constructive challenge to this description of the reading process to eddiecarron@btconnect.com

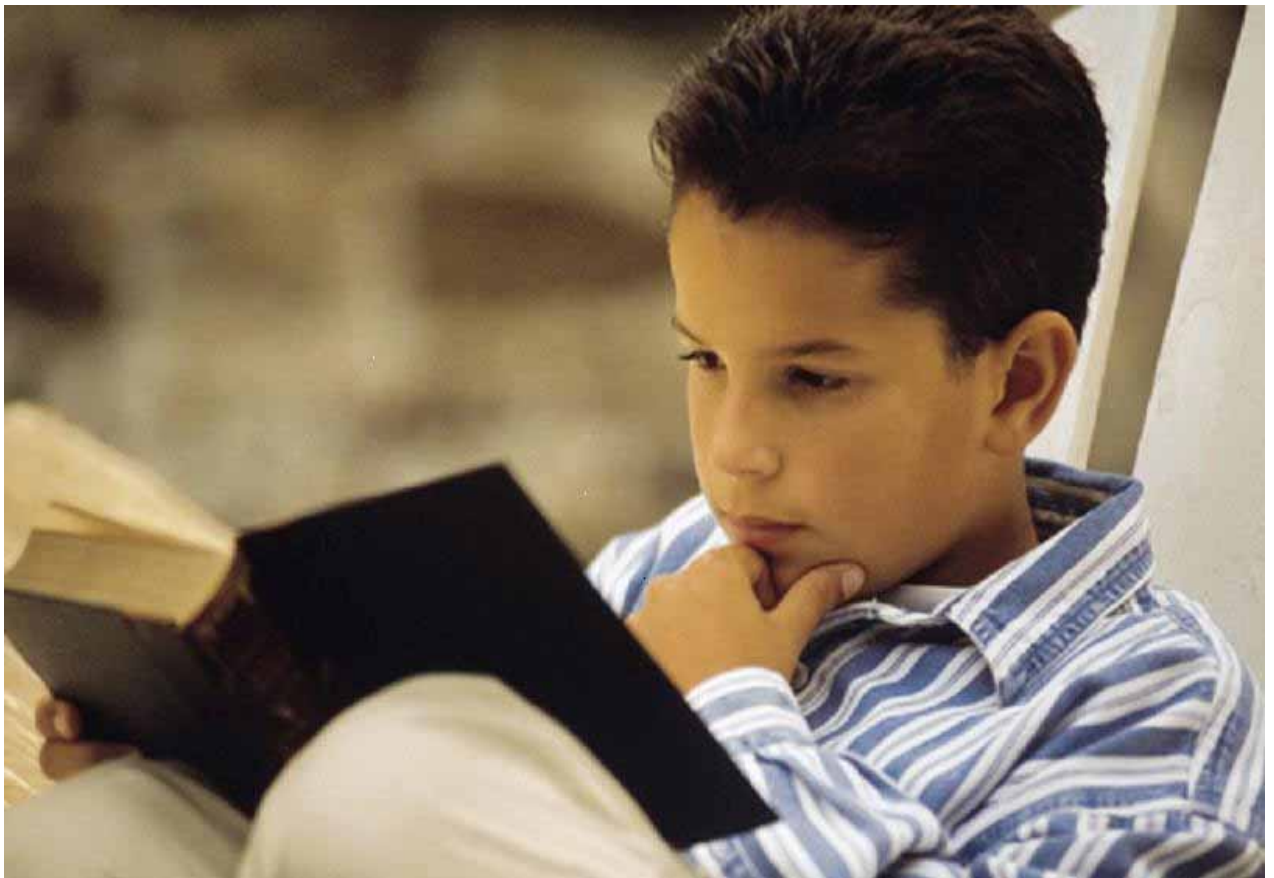
Chapter 3.

I have proposed that the problem of illiteracy that is both endemic in and virtually confined to English speaking countries and this is exclusively a consequence of the chaotic nature of the orthography of the English language. A careful consideration of the reading process itself points to a guaranteed solution to the problem.

I propose that ‘Hot Reading’ is the key to resolving reading deficits. In this chapter, I will explain the concepts of ‘Hot Reading’ and ‘Cold Reading’ and show how they resolve reading deficits, quickly and effectively. This means that I will show how to deliver the quantity and quality of reading experience which is necessary to ensure the assimilation of all of the grapheme-phoneme correspondences.

At the many ‘talks’ by literacy experts which I have endured and even on some occasions myself delivered, the question almost always arises “*But how do I motivate these children to read?*” This is a good question because it shows an appreciation of the key importance of motivation in teaching children to read. The question however, also reveals a lack of understanding of what reading is all about. **You can instruct someone to read something. You can even stimulate someone’s interest in reading something but you cannot directly motivate anyone to read anything!**

Productive reading experience has to be a voluntarily activity.

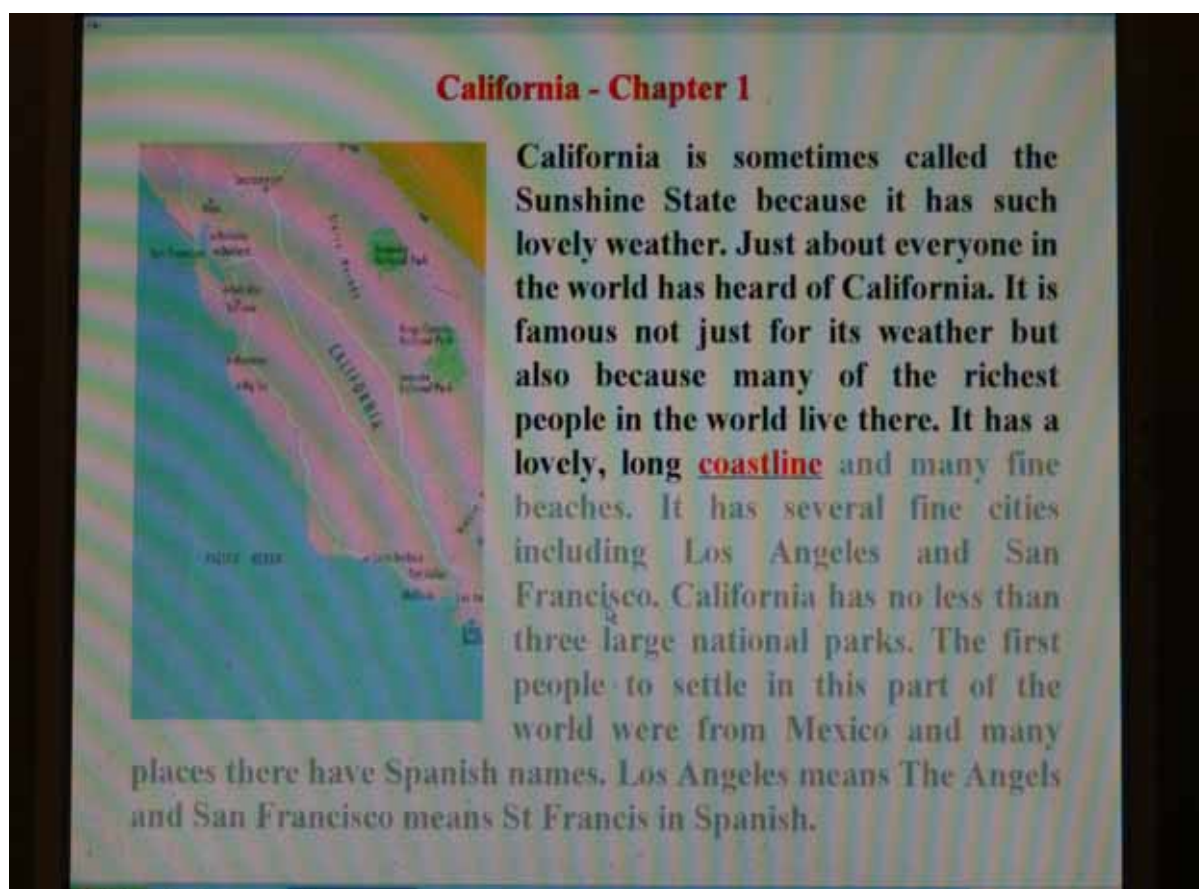


Motivation to read a particular text can only come from the intellectual content of that text. Reading is a very democratic skill because we are motivated to read only that

which interests us. Only those who are interested in restoring children's reading deficits will have reached this point in this book. A book about stamp collecting motivates some and de-motivates others. It is not the sounds the letters evoke that compel millions of children to read the Harry Potter books; it is the thoughts that swirled around in J.K. Rowling's fertile imagination and which she communicates so beautifully in her books. There is not one of us who has not, at some time in our lives, felt compelled to carry on reading a particular book until the very last word on the last page has been read and then experienced a moment of sublime sadness because the experience has come to an end. Every Year 6 child is able to read to some extent, however limited that extent may be. We should forget about teaching such children to read and focus instead on creating a situation in which they can experience the joy of reading so that they too will be able to access that magical experience, because it is only within such experience that their reading skills, however meagre to start with, will be extended. This is the central aim of this book.

Some time ago, when wrestling with the problem of how to get my poorest readers to read and to enjoy reading, I decided that the only way forward that had any chance of achieving my objective was to produce my own library of suitable titles. To succeed by the conventional route, I would have to produce titles that would appeal to publishers but I wanted to write stories that would appeal in particular, to the pupils I was teaching. Because of my conviction that reading is an asocial activity and that the intervention of another person interferes with the reading process, I made my stories suitable for presentation on a computer screen so that they could be read by pupils on their own without the involvement of a teacher. This was achieved by including a support mechanism which, at the pupil's request, would 'voice' any unfamiliar words.

This picture illustrates the programme as it appears on screen.



My aim was to create a resource which would make it possible for any pupil, no matter how severe his or her reading deficit, to read a range of titles on their own, entirely without the supervision or intervention of a judgemental adult. The darker text has been read by the child. The underlined word is the currently focused word which can be voiced by the programme and the words in softer focus have yet to be read. These are not talking books. The stories were presented on screen in very soft focus with only the first word emboldened to stand out from the page. Pupils progress the focus by simply touching the spacebar. The word in focus is voiced only if a letter key is touched.

No-one can deny the fact that all it takes to make a good reader is lots of reading. The challenge is how to ensure that children who have not yet acquired good reading skills can acquire a quantity of reading experience, sufficient to ensure the internalisation of large sight vocabulary which can form their own personal reference database for decoding any unfamiliar words they encounter. That's what is needed to be good at reading.

On completion of the session, the programme produces a 'book quality' printed version of the passage the pupil has 'read' without adult intervention. At some later point, in the process which I have described as 'Hot Reading' pupils read their prepared texts to a teacher with the expectation of making few if any, reading errors. The cumulative impact of this daily dose of success which the 'Hot Reading'

approach delivers, is an immediate boost to the self-confidence of the poorest readers. It provides them with the opportunity to achieve a quantum of experience of all the complex grapheme-phoneme correspondences which must inevitably result in their successful internalisation.

The effect of a 'Hot Reading' programme is that every child with a reading deficit, no matter how severe that deficit, is able to enjoy a daily dose of reading success and the important word here is 'enjoy'. The library has three hundred titles and embraces a range of topics which appeal to children. The strategy would involve no formal 'teaching'. Motivation to continue to routinely use the library comes initially from the unaccustomed feeling of success which the child experiences when asked to read his prepared text to a teacher or other adult. As this novel feeling loses its motivational impact, it is replaced by the appeal of the stories themselves and the 'joy' experienced in reading them. It is at this point that a dislike of reading begins to evaporate and is replaced by a fondness and in time, a love of reading. This is not because of any fondness for the reading process, but for the appeal of the intellectual content of the stories themselves, for the intellectual content of the stories is the only possible motivator as far as reading is concerned. It is important to note that this is a strategy for children aged eight or over who have demonstrated their inability to assimilate all of the chaotic grapheme/phoneme correspondences in the English language by the conventional route. It is not an initial teaching strategy. Although synthetic phonics still leaves a significant proportion of children unable to read, it is nevertheless the most productive initial reading teaching strategy in my view.

It is not the failure to learn to read but the unproductive, persistently failing act of trying to read aloud to an adult which is most damaging to a child's self-esteem. There are two types of reading aloud. There is 'Cold Reading' and there is 'Hot Reading.' Cold Reading is what happens when anyone is asked to read an *unfamiliar* passage aloud. It is a challenging task even for experienced readers, involving as it does, reading aloud while simultaneously flicking the eyes forward along a line of text in order to assimilate the meaning so that it can be effectively communicated. A teacher friend with a master's degree in English and is particularly well read, is frequently asked to do the 'reading' in church. Although familiar with most of the religious texts, she always insists on being told in advance what the text will be so that she can 'read' it before having to read it aloud to the congregation. Even the most competent reader asked to deliver a 'Cold Reading' will invariably stumble over some words and their rendition will inevitably lack the appropriate emphasis and tonal variation which is the hallmark of the delivery of a well understood passage. Reading aloud is not simply the act of saying the words represented in the text. It is an expressive act of communication and more intelligent readers will always read a passage through before reading it aloud. Interestingly, the most intelligent people will invariably read a passage through twice at least before reading it aloud. That is why their delivery is always so impressive! The approach I am proposing requires the users to read each passage twice before reading it aloud.

'Hot Reading' is reading a *familiar* passage aloud and 'Hot Reading' is the strategy used by all intelligent readers when asked to read a passage aloud to others. It makes no sense to adopt a strategy which is only used by less intelligent people, yet that is precisely the strategy used by most teachers most of the time. A 'hot reading' is inevitably much more successful, fluent and rewarding than 'cold reading' and always promotes the reader's self-esteem. It is difficult to think of a more destructive strategy than asking poor readers to read an unfamiliar passage aloud. When we do this, and we do it almost every day, we are asking poor readers to do something that we good readers would never dream of doing! Even the very poorest readers using the 'Hot Reading' strategy, experience, often for the first time in their lives, a daily dose of reading success and the effect of this borders on the magical. Hot Reading readily provides the quantity and quality of successful reading experience which those with relatively poorer working memories need to internalise all of the grapheme/phoneme correspondences in English. The library and its associated materials provide a truly massive number of encounters of all of the most commonly occurring words so that they are internalised in just a few weeks. The child's rapidly expanding store of visually internalised text words forms a massive, instantly available and highly productive source of references which he or she is able to draw on to decode less frequently occurring words. A point is quickly reached at which progress becomes exponential.

The main unique feature of the library is that it is used by children absolutely on their own without adult intervention or supervision. This is not only a unique but an absolutely essential feature, since reading is an asocial activity. The presence of another person while the child is reading at the computer actually inhibits the reading process because no-one, not even the most competent reader can read and relate or respond to another person at the same time. The time for the teacher to demonstrate teaching skills is when the child brings his or her reading folder to read the latest passage aloud. This is the time to reward success and effort. It is unproductive to say 'Well done!' to a child who has stumbled through a passage making many reading errors. The child will know that it was not well done and the teacher's praise will lose its motivational impact. When a child reads a passage aloud with no reading errors, that child knows that it was well done and the teacher's deserved praise will reinforce that knowledge.

The library offers a means of progression in that it offers titles of increasing intellectual challenge. Conscious of the fact that short attention span is often associated with poor reading skills, the passages in the lowest levels are invariably shorter and use a larger font than those in the higher levels. The difference between the passages in each level is associated with increasing degrees of intellectual challenge and not with different reading ages. The concept of reading age is based on the ability of the child to tackle text words of increasing complexity but the complexity of the text word is irrelevant in a situation in which any unfamiliar words will be voiced by the programme.

This idea came to me when I became intrigued by the performance of a street entertainer who was juggling three, flaming wooden clubs. An onlooker engaged her in a conversation and she was able to converse intelligently without missing a single throw. What the onlooker could not see of course, were the many hours of practice which the performer must have carried out, in order to perfect her juggling skills to a point at which they became a reflex action.

This juggler's skills are reflexive. Her intellect is not involved in her activity.



The fact that the juggler could carry on an intelligent conversation with an onlooker while juggling her flaming clubs meant that the mechanical sequencing of her throws and catches were being carried out subconsciously, allowing her brain the freedom to engage in the intellectually demanding act of conversing with a stranger. The same is of course true of driving, knitting, piano playing and indeed all skills. Until the aspiring reader's skills have become reflex, their consciousness will not be free of the practicalities of decoding, allowing them absorb the meaning of the text. They cannot truly be said to be reading until the skills component of decoding has become a reflex reaction to the text!

In common with all other skills such as juggling, knitting or driving a car, reading skill is independent of intellectual capacity and is solely a consequence of a specific amount of successful practice, the quantum of which, in common with all other normally distributed phenomena, varies from person to person. Although the specific mechanism which determines each individual's capacity to acquire reading skills can be the subject of legitimate academic debate, it is beyond question that the skills component of the reading process, in common with all other skills, will inevitably

respond to routinely successful practice. What is needed is a teaching strategy within which the decoding skills have the opportunity to become a reflex reaction to text.

Success in this strategy comes from the quantum of the child's exposure to a wide range of commonly occurring words, which are rapidly internalised to form the foundation references for subsequent, unsupported reading. The strategy is successful precisely because of the recognition of the fact that the decoding component of the reading process is a skill and it is an indisputable fact that given a specific quantity of practice, all skills become a reflex reaction, executed without the involvement of cognition. If readers had to consciously decode text during the reading process, how could they possibly comprehend its meaning while the brain is fully occupied consciously decoding individual graphemes?

As has already been stated, there are still teachers who take the view that the one in five children who leave school unable to read are the lowest 20% of the intellectual spectrum of ability. This implies that these children simply lack the intellectual capacity to learn to read and that consequently, their failure to learn to read is no way, a failure of their teaching. This argument does not hold water. Why is it that children in lowest 20% of intellectual potential in countries such as Finland, Puerto Rico and Germany whose languages have a regular orthography, learn to read without difficulty? Children who are failing to learn to read in English speaking countries are simply failing by the teaching methods which teachers had been trained to use! The many famously intelligent, high achievers who failed to learn to read English at school shows that this argument has no validity whatsoever. Additionally of course, it is surely beyond any dispute, that the acquisition of any skill, while clearly dependent on some physical attributes, is completely independent of intellect.

It may be of course that there are people whose brains are wired differently and who consequently, experience greater difficulty in acquiring a reflex reaction to printed text. This does not alter the fact that learning to read involves learning the sounds that the letters make to a point at which their recognition/decoding becomes an automatic, reflex reaction which does not involve cognition (conscious thinking). The vast majority of those who leave school every year unable to read are well able to recognise and vocalise the letters and letter groups of the alphabet but this ability has not been practiced to a point at which the response process has become independent of cognition. Their 'schooling' has not included the appropriate quantum of successful experience to make this happen. Where reading competence is the aim, mastery of the mechanical or 'skills' component of the reading process is essential whatever learning difficulties any particular child may have inherited from his or her parents.

There is of course, a tiny percentage of children, possibly around 1.5%, whose learning difficulties mean that they will never learn to read but this fact cannot explain the failure to deliver literacy to 20% of the populations of English speaking countries. It does not take intellectual superiority to make a good juggler; just lots of successful juggling practice. Similarly, it does not take a superior intellect to become a

competent reader; just lots of successful reading practice. Failure by 20% of children to acquire fluent reading skills is not an indication of their intellectual inferiority; it is an indication that the education system has failed to deliver to them, the appropriate quantum of successful reading practice. There is ample evidence that the brain is a quantum device and that the operation of short term or working memory determines absolutely what is and what is not granted access to long term memory. Children with less effective working memories can learn to read as well as anyone else but they do require a higher number of successful encounters of each of the irregular grapheme-phoneme correspondences. They need an approach which can offer support to their reading until they acquire the necessary quantum of experience because only this will protect them from experiencing the debilitating loss of self-esteem which inevitably accompanies the use of teaching methods which are not appropriate to their particular needs. Failure by some 20% of children in English countries to acquire reading fluency is an unacceptable failure of teaching and not an indication of intellectual inferiority! It is proof of a system of education that fails to deliver, the quantum of successful reading practice which is necessary to make them good readers.

The failure of the education systems in all English speaking countries to appreciate the logic of this 'Quantum' literacy theory and to respond appropriately to that logic, fully explains our failure to deliver literacy to all of our children. Unless teachers and teacher training institutions grasp the fundamental truth of the 'Quantum' literacy theory and train teachers accordingly, schools are unlikely to break the institutionalised attitude to illiteracy. Endemic illiteracy is neither necessary nor inevitable. The way to end it is to subject the theories proposed here to rigid testing in a representative sample of schools in a project conducted and overseen by one of our great institutions of learning. The relevant government departments are too involved in their internal, petty politics and the personal sensitivities of individual 'experts' to be impartial. Such a trial would be very inexpensive yet its outcome could have a profound impact on literacy all over the world.

It is a fact of life that a very large proportion of the populations of all English speaking countries are less than functionally literate. It is equally beyond dispute that for the most of their lives, those who are illiterate will be economically inactive. Not only will they not contribute to national economic prosperity but they will invariably be a significant drain on national resources and form a high proportion of the prison population. The reasons for confronting this issue are therefore, not only the well-being of millions of individuals; they are also concerned with the well-being of societies as a whole.

It is also worth adding that in my experience that the concept of 'reading age' is one that is not well understood by most teachers. There is a tendency to believe that a reading age of say 8.0 means that the child has the reading ability of the average eight year old but that is an overly simplistic interpretation. Inevitably, half of the population have an IQ which is above the average and the other half have an IQ which is below this point. Only about one person in six has an IQ which falls in the average

band. What a reading age of 8 actually means that it is the reading age of the average eight year old with an average IQ. The reading of the average high IQ eight year old will be much higher – probably around 10.0. Conversely, the reading age of the average eight year old with an IQ of say 80 will be much lower. If a child age 8 has a reading age of 8 and a high IQ, that child has a reading deficit when compared with his or her intellectual peers.

A child of 6.5 years of age would be doing alright with a reading age of 6.5 but this same reading age would be a disaster for a ten year old, whatever his or her IQ. A reading age of 6.5 tells us that a child can read, but not very well! When a child can read, all that child needs to improve his or her reading skills is a lot of successful reading practice. Too many teachers write off children with a reading age of below 7 as non-readers and that is like a death sentence for the child's hopes of becoming as literate as his or her peers. Any child with a measurable reading age can read – that must be emphasized. Non-readers are very rare indeed. Nothing other than lots of reading successful practice will enhance poor reading skills.

The leading international academics who participated in the TV programme 'The Dyslexia Myth' (See YouTube The Dyslexia Myth) agreed that a child with a significant reading deficit is simply stuck at a low point in the reading learning curve and cannot make progress because s/he cannot get access to the necessary reading successful experience. I do not agree that dyslexia is a myth but I do agree with their analysis of its impact of poor readers. Dyslexia does not prevent Finnish, German, South Korean or Puerto Rican children from learning to read! What it takes to make a good reader is lots of productive reading. Nothing else.

It is my belief based on my experience that each child requires a quite specific number of successful encounters of each irregular word before that word is internalised to a point that it can be sub-vocalised reflexively. About 80% of any population can internalise frequently occurring, irregular words after a very few encounters. Similarly, about 20% of a population will require a disproportionately higher number of productive encounters to acquire a similar level of decoding expertise. This fact in no way reflects on their ability to comprehend the words they are able to decode. Decoding is a skill and consequently is completely independent of intellect. The vast majority of alphabet based languages are almost completely phonetic therefore the problem of internalising thousands of irregular words simply does not arise; hence their high levels of literacy. It is the intellectual capacity of an individual which governs that individual's ability to comprehend language, however it is encountered. An individual's intellectual capacity does not however impinge of his or her ability to acquire a skill because the acquisition of a skill is solely a consequence of practice and motivation. The 'hot reading' approach delivers the necessary quantum of productive, word acquisition experience because it provides poor readers with a means of accessing the intellectual content of text and it is this which works its motivational magic.

In order to read a passage, the text has somehow to be decoded into the sub-vocal phenomenon we call 'thought speech.' To read reflexively means that the decoding part of the reading process is carried out at a non-conscious level and communicated as sub-conscious thought speech, to other parts of the brain for 'comprehension' MRI and other research tools show that whereas conscious thought requires the simultaneous involvement of many areas of the brain, non-conscious or reflex thought involves a single brain area. Reflexive decoding leaves the brain largely free to deal with the incoming stream of meaning which floods the consciousness. The poor reader's consciousness is fully occupied trying to make the connections between graphemes and their associated phonemes. Their lack of an extensive, internalised, reference database of text words robs their reading of any chance of fluency or accuracy. Uniquely in English, the very loose association between graphemes and phonemes makes the achievement of reflexivity, a much more complex business compared to the same process in other languages.

In this chapter, I have placed great emphasis on the fact that the 'retrieval' component of the reading process is a conventional skill and that only a teaching strategy which recognises and makes use of this fact has any chance of success. I have also described an approach which is based on the recognition of this fact and which in research and in practice, has been shown to be capable of bringing literacy standards in English speaking countries to the same level as those in countries which have a logical, regular orthography. I would welcome any constructive challenge to these statements to eddiecarron@btconnect.com

Chapter 4

I regard reading as the ‘retrieval and assimilation of the intellectual content of text.’

I have argued that the ‘*retrieval*’ component of the reading process is a skill and consequently must respond to routinely successful practice. I have also argued that the ‘*assimilation*’ component is a function of the intellect and therefore is not responsive to practice.

The acquisition of any skill depends solely on motivation and practice and is therefore, entirely independent of innate intellectual capacity.

In this chapter I will attempt to describe the comprehension process and consider how it is enhanced.

“Proficient reading depends on the ability to recognize words quickly and effortlessly. If word recognition is difficult, students use too much of their processing capacity to read individual [words](#), which interferes with their ability to comprehend what is read.” Adams, Marilyn Jager. *Beginning to Read: Thinking and Learning about Print*, MIT Press, 1990, p. 27

Since reading is about retrieving the meaning which an author has invested in text, it follows that comprehension of that meaning is the purpose of the reading process. I was once asked by a concerned teacher how she should respond to the needs of an immigrant child who could ‘read’ anything that was put in front of him but appeared to be unable to make little sense of what he had ‘read!’ This teacher showed me the range of commercial ‘Comprehension’ products which she had been using for some years and readily conceded that although her pupils enjoyed completing these exercises, they appeared to have little impact on their understanding of language generally.

It is widely agreed that the understanding (comprehension) of language takes two forms, viz. literal and inferential comprehension. Literal comprehension is our appreciation of the literal or factual content expressed in a text.

“There are five pigs!”

“How many pigs are there boy?”

“Five sir!”

“Excellent. Well done boy!”

This would be a crude example of the literal comprehension of a statement expressed in text. It is reasonable to assume that the same question expressed as speech would have resulted in the same level of understanding. Whether a word is spoken or decoded from text into ‘thought speech’ can have no bearing on whether or not it is understood.

A great deal and possibly even most of the meaning in any more complex statement is implied rather than literally stated. Even in the simple example used here, there is an assumption that the boy knows what a pig is and appreciates the cardinal value of the word 'five' because that information is not supplied in the statement. Therefore, the extent to which meaning implied in a statement is understood is critical in the comprehension process. One boy might never have either seen or heard of a pig. Another might never have seen a pig but have seen a picture of one. Another boy might have a farming background and have raised many pigs himself. We acquire understanding of the meaning of most words not in any classroom, but in the vast array of first hand experiences which we accrue in our daily lives and these experiences vary from individual to individual both in quality and in quantity. It is this complexity of first and second hand life experience that forms the basis of all comprehension, literal and inferential.

While highlighting the importance of life experience on comprehension to a group of teachers, I read out the following "*Before lunch, the farmer had finished harrowing the lower field.*" When I asked all teachers who understood the statement to raise their hand, every teacher did so. When I subsequently asked randomly selected teachers to explain to me what 'harrowing' was, not one single teacher was able to respond accurately and it was clear that their comprehension of the statement was limited to the appreciation of the fact that 'harrowing' was some kind of agricultural activity. Clearly, any children with a farming background, no matter how limited their intellectual capacity, would know exactly what 'harrowing' was, how it was carried out and what it achieved.

When a word is experienced directly as speech or indirectly as text or 'thought speech', our brains are organised in such a way that the sound of the word, evokes the subconscious memory experience of other closely associated words. This might be called the first level of association. Each of these evoked ideas is in turn, linked to its own set of associated ideas in what might be termed a second level of association. The entire comprehension process might involve a third, fourth or possibly even an infinite number of associated ideas. The number and extent of these associated ideas determines the depth of an individual's ability to comprehend language.

Understanding is therefore, the cascade of associated ideas which is triggered by a word, however that word is encountered. The reading process involves the serial evocation of hundreds or possibly even thousands of words and consequently, the release of a continuous stream of these cascades of ideas which merge into the single experience continuum which we call comprehension. Language is the principal tool which human beings use to communicate with each other. The only way to enhance a child's ability to understand language is to ensure that the child enjoys the widest possible quantity and quality of experiences.

This subject was confronted by Basil Bernstein who postulated the ideas of an 'elaborated' and a 'restricted code' in language. I strongly recommend anyone

interested in this particular aspect of language to his seminal work *Class, codes and Control* and quote here a small extract which I feel reinforces the point I am try to make.

“Bernstein suggests a correlation between social class and the use of either elaborated or restricted code. He argues that in the working class you are likely to find the use of the restricted code, whereas in the middle class you find the use of both the restricted and elaborated codes. His research suggests that the working class individuals have access only to restricted codes, the ones they learned in the socialization process, where “both the values and role systems reinforce restricted codes” (Littlejohn, 2002 p.179). However, the middle class, being more geographically, socially and culturally mobile has access to both the restricted codes and elaborated codes. (Atherton, 2002). The restricted code is less formal with shorter phrases interjected into the middle or end of a thought to confirm understanding. For example, “you know” ,” “you know what I mean,“ “right?” and “don’t you think?” Elaborated codes have a longer, more complicated sentence structure that utilizes uncommon words and thoughts. In the elaborated code there is no padding or filler, only complete, well laid out thoughts that require no previous knowledge on the part of the listener, i.e., necessary details will be provided. According to Bernstein (1971), a working class person communicates in restricted code as a result of the conditions in which they were raised and the socialization process. The same is true for the middle class person with the exception that they were exposed to the elaborated code as well. Both groups use restricted code at some point, for as Atherton (2002) points out, “Everyone uses restricted code communication some of the time. It would be a very peculiar and cold family which did not have its own language.”

Teachers who seek to resolve a child’s reading difficulty may feel that language development is the primary role of English teachers and that the job of enabling them to recreate ‘words’ from text is challenge enough. Clearly and with good supporting evidence, Bernstein sees comprehension more as an outcome of the socialization process. There is a view that intelligence is simply a measure of an individual’s ability to form associations or links between all of the factual information which has been absorbed in the socialisation process.

It is probably self-evident that even those who are totally illiterate nevertheless have an extensive receptive vocabulary possibly as a consequence of many thousands of hours of communion with their television sets. It seems odd that this often vast experience of language impacts so lightly on their own personal, expressive vocabularies and the range of an individual’s expressive vocabulary corellates strongly with their general comprehension ability.

Since I am at heart a chalk-face teacher turned researcher, I see my own personal contribution to securing universal literacy in English speaking countries as being limited to the practical rather than the theoretical aspects of this problem. The advancng years and a lack of funds mean that the research project for the 2010/11

academic year which I am in process of organising will be my final contribution. I can only hope that at some point in the future, someone else will recognise the enormous potential of the 'hot reading' approach for securing literacy for the millions of people who are otherwise condemned to a life of illiteracy and take this work forward to its logical conclusion.

I have deliberately limited my contribution on the subject of comprehension because I believe that the main barrier to universal literacy lies in the skills and not in the intellectual component of reading. The comprehension process is triggered by words, whether these words take the form of 'thought speech' or are spoken or created during reading, I have sought only to explain what I perceive as its mechanism as far as the reading process is concerned. Anyone wishing to challenge or criticize my views should do so by emailing me at eddiecarron@btconnect.com

Chapter 5.

In this chapter I will provide details of some practical research projects based on the theories proposed in this publication. This first of these was a large scale, national project involving some eighty schools and some one thousand pupils conducted in the year 2000. The range of schools involved was carefully selected to represent schools nationally. Included were schools in rural and in urban areas as well as schools in inner city areas with large immigrant populations. A group of Scottish schools was included because Scotland does not operate the same literacy policies or participate in the same national tests as schools in the rest of the UK. One representative independent school was included to give the project credibility.

Each of the participating schools is identified and each school conducted its own application of the strategy which was provided to them on CD. Each school also produced its own 'before and after' results.

The second project is a more limited and still ongoing one. For any teachers of Year 6 children who may interested, we are currently planning a large-scale literacy project for the academic year 2010/11. Anyone who might be interested in participating should contact me at eddiecarron@btconnect.com

The most recent and still ongoing pilot project is interesting precisely because it was still ongoing as the first edition of this publication was published in November 09. At the time of writing, the outcome of the project is unknown. The teacher involved in the pilot project is one of many who, consequent on having read an article in the online teachers magazine ICTOPUS, expressed an interest in participating in the research. She teaches in Blakeney Primary School in Gloucester and in the current academic year, 2009/10 has eleven Year 6 children in her class. This teacher and her head teacher who also teaches this group, provided the predictions below for her Year 6 pupils in the 2010 Key Stage 2 tests at the beginning of the project in September 2009. These children will be using the Hot Reading strategy outlined in this book throughout the 2009/10 academic year. Alongside the routine Hot Reading sessions, the group will also undertake general literacy skills improvement work based on the same principle. Actual test outcomes will be added when they become available in July 2010 and of course, they will be verifiable on the internet. I have had no contact with this school other than by occasional email and whatever is achieved over their predicted outcomes will be the product of the effort they have invested in introducing and applying a different approach to the promotion of literacy. I look forward to adding their comments.

For readers in Scotland or other English speaking areas of the world, all pupils in England and Wales take a national test at age 11 at what is called the Key Stage 2 test in the basic skills areas. Level 4 is the average reading standard. Level 3 is below average attainment and Level 5 is above average.

	Blakeney School's Predictions Published in	My predictions Published in	Actual Results to be Added After the
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	September 2009	September 2009	National Tests in June 2010
Level 3	5 pupils	0 pupils	
Level 4	4 pupils	4 pupils	
Level 5	2 pupils	7 pupils	

Unfortunately, the part-time teacher involved in this project missed a great deal of the academic year including absence for the whole of the final term on maternity leave. The school predicts that almost half of these children would graduate to secondary school without the basic literacy skills needed to take advantage of the secondary school curriculum. This would have been nothing less than a tragedy for these children and for society as a whole because this situation is repeated many times over in the twenty-five thousand or so UK primary/junior schools. It is a matter of published record that class teachers are able to accurately predict Key Stage 2 English outcomes. What are we to believe however, if after a simple change in thinking in the Year 6 curriculum involving only about 30 minutes a day, the near miraculous results which I have predicted prove to be the case? It is most likely that in the 2010 Key Stage 2 English tests, once again, nationally one child in five will graduate to secondary schools less than functionally literate. If as would seem most likely, this class teacher proves to be more accurate in her predictions for a group of children she knows personally and well, my own reputation will have been significantly tarnished but in the great scheme of things, that is of no importance.

If on the other hand, my predictions for children about whom I have no personal knowledge prove to be accurate then it follows that, in this year alone and in this country alone, many tens of thousands of children will have had their self-esteem seriously abused and their chances of successfully exploiting the expensive educational opportunities on offer, utterly and unnecessarily destroyed. Multiply this by the number of children who would have been short-changed by the education system over the past six decades in every English-speaking country in the world and the implications are nothing short of a catastrophe. The financial costs to these societies are enormous and would greatly exceed the costs of even our most expensive wars and recessions. We castigate bankers for undermining world economies and lowering peoples' standards of living yet the economic damage they cause pales into insignificance compared to the damage done by inept systems of Education.

If as seems much less likely, my predictions prove to be even nearly accurate, consider the implications for societies in general; for their social services and their courts and prison systems which house a high proportion of illiterates. Think also of the impact on the economy of a much better educated population and a much less costly Education system because it is an inescapable fact of life that the most expensive pupils to maintain are those who are failed by the system. Think also of the reductions of the stresses that teachers are subjected to, in some large measure by these very children.

It is the job of the primary stage of Education to equip children with the basic educational skills they will need to effectively tackle a secondary school curriculum. As long as primary schools are not given the knowledge and means to deliver the required standards of literacy, the present unsatisfactory situation will inevitably persist. It is simply not good enough to keep stuffing these children's heads with the same never-ending diet of uninspiring phonics that has failed them in the past. We know that this doesn't work for these children. It must surely be obvious that if hundreds of thousands of children are not responding to conventional remedial teaching strategies in tens of thousands of schools in every English speaking country in the world, there is a serious need for some 'out of the box' thinking.

If we were to take a leaf from other professions, we would copy their research strategies and provide a formal route from the kind of practical research that is described here, through the various stages of assessment and verification into practice. We have a massive illiteracy problem, yet we do not have either a practical, professionally agreed definition of reading or a clearly defined route from research to practice. It would seem that 'whim and political expediency' are good enough for Education! This is surely an attitude which we can neither afford nor morally sustain.

If the outcomes which I have predicted for this group are in fact achieved, this would be nothing less than miraculous. It will be life-changing for these children, and if repeated nationally, would take the UK from the bottom, straight to the top of the European Literacy League Tables. It would undoubtedly represent a complete resolution of the illiteracy which is endemic in all English speaking countries. It remains to be seen of course, what the actual outcomes will be. Positive intervention in a child's reading difficulties in Year 6 is admittedly leaving things a bit late and is not something I would propose as a national strategy. My own work suggests that the Hot Reading strategy also works well with children in Years 4 and 5 but a Year 6 group is more suitable for the purposes of research project because of the externally administered Key Stage 2 tests which take place at the end of this crucial year.

If Blakeney Primary school successfully adapts to the Hot Reading strategy even at this late intervention stage, every child in this Year 6 group will transfer to secondary school as a literate hopeful and that will be a whole new experience for this small school. Their self-esteem will have been significantly boosted. The hang-dog expression of failure will vanish from their body language and be replaced by aspirational self-confidence. The cost to the school in financial terms will have been zero because the remedial resources were delivered online. A very significant feature of this means of delivery is that the resources can be varied, refined and extended centrally as useful data emerges from their use just like in a 'real profession' and all at no significant cost to the end user. At the same time as the results from this group's Key Stage 2 results are published in the summer of 2010, hundreds of thousands of children in English speaking countries will quite unnecessarily, leave school less than functionally literate. It would be very simple and inexpensive for government to repeat this trial over a credible sample of schools and ask one of our great institutions of learning to oversee its implementation and

the analysis of the outcome. If the results achieved came even close to matching those which my own work has produced, illiteracy could be eradicated world-wide, quickly and at no significant cost to taxpayers.

What is going on in this small primary school is interesting also from another point of view. The biggest teacher unions have always argued against the testing of children, claiming that the tests are stressful both for staff and for the children. Perhaps even more significantly, they have repeatedly claimed that the test outcomes which many parents, particularly middle class parents, use to decide which school to send their children to. The unions argue that the test outcomes are simply a reflection of the socioeconomic make up of the school's catchment area, implying that poorer, working class areas are always going to achieve lower scores in the tests than more affluent areas. There is no doubt that there is good correlation between the test results and a range of socioeconomic indicators such as free school meals but it is far from certain why this is the case

If the results which I predict are in fact achieved, this would surely challenge the myth that low literacy scores at Key Stage 2 are an unavoidable consequence of lower socioeconomic catchment area status and since these results would have been achieved by an intervention which costs nothing and was introduced two years later than is ideal, the government's stated support for the Reading Recovery remedial approach which costs £5000+ per pupil and offers no guarantee of anything, must look pretty silly. I have no doubt whatsoever that my predicted results will be achieved in spite of the fact that the intervention began later than I would have wished. Had this intervention been introduced in Year 5, I would have predicted that every child would achieve Level 5! The English language is a wonderful gift that the British have given to the world. It is however, a gift that has the inbuilt disadvantage that the acquisition of the full range of its literacy skills presents problems for a significant proportion of the population who will not readily absorb all of its grapheme-phoneme correspondences by conventional rote teaching. I have shown by practical example that this is not an insurmountable problem provided it is tackled, not by whim and political expediency as has been the case in the past, but by a professional approach based exclusively on rigorous empirical evidence. I hope that the efforts of this one small school in Gloucester will make this point in the clearest way possible. Educational establishments in every English speaking country in the world have consistently shown themselves to be incapable of achieving anything like the standard of literacy that is routinely achieved in non-English speaking countries. It will be interesting to see if this small Gloucester school can show the world how to succeed where armies of highly paid literacy 'experts' and 'specialists' have failed.

The larger project which I have planned for the 2010/11 cohort will surely demonstrate that the UK need no longer languish at the bottom of the EU literacy league table. For that project based on several hundred pupils, I predict better than 95% will achieve level 4 or 5 with a majority achieving the higher level. For more details, contact me at eddiecarron@btconnect.com

Millennium Literacy Project.

This research involved some one thousand Year 6 pupils selected by their schools to participate in this large scale project using the same 'Hot Reading' strategy. When considering the average and highest gains in reading skills reported here, it should be remembered that these children were otherwise destined to become part of the 20% or so who leave school illiterate. Also please note that reading skills fall behind when reading age gain is less than one year in one calendar year. These children's reading had on average progressed at a rate of only 0.7 months in each year and they had accrued an average reading-age deficit of two years. In the project year, their reading improved on average by 1 year 8 months. Any increase in reading age in one calendar year which is greater than one year means that their reading ages are on course to overtake their chronological ages. Each participating school was provided with a copy of the Electronic Library similar to the one now freely available online, after they had submitted their list of participating children and their reading ages.

An area advisory teacher collected the data from the schools in each of the participating Local Education Authorities and collated and submitted the data at the end of the project period. A number of schools did not complete the project for a variety of different reasons and are not included in the results published here.

Coldstream Primary School, Coldstream, Berwickshire, TD12 5HN

Average reading age of participant group in August 1999-----8 :5
Average reading age of participant group in March 2000-----9 : 8
Highest individual reading-age gain -----2.:2

Burnfoot Community School, Kenilworth Avenue, Hawick, TD9 8EQ

Average reading age of participant group in August 1999----- 7:6
Average reading age of participant group in March 2000----- 9:10
Highest individual reading-age gain ----- 2:10

Kingsland Primary School, Rosetta Road, Peebles EH45 8HQ

Average reading age of participant group in August 1999----- 7:5
Average reading age of participant group in March 2000----- 8:9
Highest individual reading-age gain ----- 2:7

Philip Haugh Community School, 2 Linglie Road, Selkirk TD7 5JJ

Average reading age of participant group in August 1999-----8 :3
Average reading age of participant group in March 2000-----9 :2
Highest individual reading-age gain -----3 :6

Eyemouth Primary School, Eyemouth, Berwickshire, TD14 5BJ

Average reading age of participant group in August 1999	-8:4
Average reading age of participant group in March 2000	-10:0
Highest individual reading-age gain	-3:3

Hobkirk Primary School, Bonchester Bridge, Hawick, Roxburghshire TD9 8JU

Average reading age of participant group in August 1999	8:5
Average reading age of participant group in March 2000	-10:2
Highest individual reading-age gain	3:3

Walkerburn Primary School, Walkerburn, Peebleshire EH43 6AU

Average reading age of participant group in August 1999	-9:1
Average reading age of participant group in March 2000	10:9
Highest individual reading-age gain	3:3

Langlee Primary School, Langlee Drive , Galashiels, TD1 2EB

Average reading age of participant group in August 1999	-9:0
Average reading age of participant group in March 2000	-10:9
Highest individual reading-age gain	-3:3

"Impressive improvement in ability to read with understanding in a short period of time.

Parkside Primary School, Jedburgh, Roxburghshire TD6 6HD

Average reading age of participant group in August 1999-----	7:5
Average reading age of participant group in March 2000-----	8:7
Highest individual reading-age gain -----	3:3

Applecroft JMI School, Applecroft Rd, Welwyn Garden City, AL8 6JZ

Average reading age of participant group in August 1999-----	8:8
Average reading age of participant group in March 2000-----	9:8
Highest individual reading-age gain -----	1:6

Five out of the six target children expected only to achieve Level 3 in fact achieved Level 4 School achieved 96% with Level 4 or above. which must be very significant.

Blackthorn Junior School, Blackthorn Rd, Welwyn Garden City, AL7 3JP

Average reading age of participant group in August 1999-----	8:6
Average reading age of participant group in March 2000-----	9:0
Highest individual reading-age gain -----	0:9

Creswick JMI School, Howlands, Welwyn Garden City, AL8 4HU

Average reading age of participant group in August 1999----- 8:8
Average reading age of participant group in March 2000----- 9:6
Highest individual reading-age gain ----- 1:8

St Mary's JMI School, London Rd, Welwyn Garden City, AL6 9DJ

Average reading age of participant group in August 1999----- 9:1
Average reading age of participant group in March 2000----- 10:3
Highest individual reading-age gain ----- 3:2

Annfield Plain Primary School, Annfield Plain, Stanley, Co Durham DH9 7ST

Average reading age of participant group in August 1999----- 9:1
Average reading age of participant group in March 2000----- 10:8
Highest individual reading-age gain ----- 2:0

Burnhope Primary School, Langley Avenue, Burnhope, Co Durham DH7 0AG

Average reading age of participant group in August 1999----- 8:9
Average reading age of participant group in March 2000----- 9:5
Highest individual reading-age gain ----- 2:2
"Children were always keen to use the library and progress through the levels.."

Colliery Primary School, Stanley DH9 9

Average reading age of participant group in August 1999-----7::8
Average reading age of participant group in March 2000 ----- 8:5
Highest individual reading-age gain ----- 1:5

Catchgate Primary School, Catchgate, Annfield Plain, Stanley, DH9 8LX

Average reading age of participant group in August 1999----- 9:1
Average reading age of participant group in March 2000----- 9:8
Highest individual reading-age gain ----- 1:3
"The children do not show the same enthusiasm for some other remedial resources."

St Patricks Primary School, Dipton, Co Durham

Average reading age of participant group in August 1999----- 8:11
Average reading age of participant group in March 2000----- 11:3
Highest individual reading-age gain ----- 2:4

Lanchester C.P. School, Co Durham

Average reading age of participant group in August 1999 ----- 9:4
Average reading age of participant group in March 2000----- 10:5
Highest individual reading-age gain ----- 2:8

North Yorkshire: Tricia Smith, Learning Support Service, Skipton BD23 1PD

Water Street C.P. School, Skipton BD23 1PE

Average reading age of participant group in August 1999 ----- 9:6
Average reading age of participant group in March 2000----- 10:5
Highest individual reading-age gain ----- 2:4

"We found this system both practical to use in a large class and of great value in the feedback it provides."

St Stephens RC Primary. School, Skipton

Average reading age of participant group in August 1999----- 8:9
Average reading age of participant group in March 2000----- 10:3
Highest individual reading-age gain ----- 4:3

Ings C.P. School, Skipton

Average reading age of participant group in August 1999----- 7:6
Average reading age of participant group in March 2000----- 10:0
Highest individual reading-age gain ----- 3:9

Christ Church C.E School, Skipton, BD23 2AP

Average reading age of participant group in August 1999----- 8:5
Average reading age of participant group in March 2000----- 9:7
Highest individual reading-age gain ----- 2:6

"The format of the Electronic Library was very appealing to the children who were motivated to read, even at the end of the year. It was easy to detect if the child had not prepared the text well."

Parish C.P. School, Skipton

Average reading age of participant group in August 1999----- 8:3
Average reading age of participant group in March 2000----- 9:8
Highest individual reading-age gain ----- 2:3

Greatwood C.P School, Skipton

Average reading age of participant group in August 1999----- 9:2

Average reading age of participant group in March 2000----- 9:11

Highest individual reading-age gain ----- 1:4

"This school reported hardware problems for a time but did report some improvement in attitude to reading and self-esteem."

Rosary RC Junior School, Heston TW5 0RL

Average reading age of participant group in August 1999----- 8:7

Average reading age of participant group in March 2000----- 10:2

Highest individual reading-age gain ----- 3:0

Beavers Community Primary School

Average reading age of participant group in August 1999 ----- 8:4

Average reading age of participant group in March 2000 ----- 9:4

Highest individual reading-age gain ----- 1:3

Forge Lane Junior School

Average reading age of participant group in August 1999----- 8:4

Average reading age of participant group in March 2000----- 9:3

Highest individual reading-age gain ----- 2:2

Lionel Primary School, Brentford, TW8 9QT

Average reading age of participant group in August 1999 ----- 8:4

Average reading age of participant group in March 2000----- 9:8

Highest individual reading-age gain ----- 4:0

Norwood Green School

Average reading age of participant group in August 1999----- 8:4

Average reading age of participant group in March 2000----- 10:2

Highest individual reading-age gain ----- 2:1

Victoria Junior School,

Average reading age of participant group in August 1999----- 7:3

Average reading age of participant group in March 2000----- 8:9

Highest individual reading-age gain ----- 3:2

Isleworth Primary School, Isleworth, TW7 6AB

Average reading age of participant group in August 1999 ----- 8:2

Average reading age of participant group in March 2000----- 9:11

Highest individual reading-age gain ----- 1:6

Southville Junior School, Feltham

Average reading age of participant group in August 1999-----	8:3
Average reading age of participant group in March 2000-----	9:8
Highest individual reading-age gain -----	4:6

St Mary's RC Primary School, Chiswick 4 2DF

Average reading age of participant group in August 1999-----	8:0
Average reading age of participant group in March 2000-----	10:2
Highest individual reading-age gain -----	3:2

Milverton CP School, Tauton TA4 1JP

Average reading age of participant group in August 1999-----	8:5
Average reading age of participant group in March 2000-----	9:11
Highest individual reading-age gain -----	2:6

Moorside Junior School, Ripon, HG4 1SU

Average reading age of participant group in August 1999-----	8:5
Average reading age of participant group in March 2000-----	9:10
Highest individual reading-age gain -----	2:6

Bedale CE Primary School, Bedale DL8 2AT

Average reading age of participant group in August 1999-----	8:5
Average reading age of participant group in March 2000 -----	9:11
Highest individual reading-age gain -----	1:9

"I know that the childrens' belief that they are now really good at reading has made it all worthwhile. It did run itself once organised."

Stokesley C.P.School, Springfield, Stokesly TS9 5EW

Average reading age of participant group in August 1999-----	8:6
Average reading age of participant group in March 2000-----	9:6
Highest individual reading-age gain -----	1:7

"The approach works well as the majority of the tasks can be completed without teacher input."

Mill Hill C.P. School, Crosby Road, Northallerton DL6 1AE

Average reading age of participant group in August 1999-----	9:6
Average reading age of participant group in March 2000-----	10:2
Highest individual reading-age gain -----	1:6

Applegarth C.P. School, Upwell Rd, Northallerton DL7 8QF

verage reading age of participant group in August 1999 -----	8:9
Average reading age of participant group in March 2000-----	10:3

Highest individual reading-age gain ----- 1:4

Roseberry C.P. School, Roseberry Crescent, Great Ayton TS9 6EP

Average reading age of participant group in August 1999----- 8:11

Average reading age of participant group in March 2000----- 10:8

Highest individual reading-age gain ----- 3:0

"The children had obvious enjoyment and improvement in reading.."

Ballamoore C.J. School, Moor View R, Northallerton DL6 1RF

Average reading age of participant group in August 1999----- 9:1

Average reading age of participant group in March 2000----- 10:3

Highest individual reading-age gain ----- 3:2

"Most children have really enjoyed using the Electronic Library."

Aysgarth School, Bedale DL8 1TF

Average reading age of participant group in August 1999----- 8:10

Average reading age of participant group in March 2000----- 10:8

Highest individual reading-age gain ----- 3:4

"The Electronic Library is a self-motivating and leads to greater confidence and fluency."

Richmond Methodist Primary School, Darlington Rd, DL10 7BH

Average reading age of participant group in August 1999----- 9:0

Average reading age of participant group in March 2000----- 9:11

Highest individual reading-age gain ----- 0:11

Colburn C.P. School, Catterick Garrison DL9 4LS

Average reading age of participant group in August 1999----- 9:0

Average reading age of participant group in March 2000----- 10:3

Highest individual reading-age gain ----- 2:5

"I have found this approach wonderful the quality of the feedback boosts confidence.."

Wavell Junior School, Catterick Garrison DL9 3BJ

Average reading age of participant group in August 1999----- 9:3

Average reading age of participant group in March 2000----- 10:9

Highest individual reading-age gain ----- 2:10

"The Electronic Library has been brilliant. 75% of children not expected to achieve Level 4 in reading did so."

Leyburn C.P. School, Wenslydale Ave, Leyburn DL8 5SD

Average reading age of participant group in August 1999-----	8:3
Average reading age of participant group in March 2000-----	9:7
Highest individual reading-age gain -----	2:2
<i>"The element of independence has been invaluable. The children have operated the programme themselves with ease and have wanted to do it, even before school."</i>	

Pickering Community Junior School, Pickering

Average reading age of participant group in August 1999-----	8:4
Average reading age of participant group in March 2000-----	9:11
Highest individual reading-age gain -----	4:0

Grove Rd C.P.School, Grove Rd, Harrogate HG1 5EP

Average reading age of participant group in June 1999 -----	9:4
Average reading age of participant group in June 2000 -----	11:1
Highest individual reading-age gain -----	3:0
<i>"These children made reading-age gains greater than those not on the project."</i>	

Oaklands C.J. School, Beechwood Grove, Harrogate HG2 8QP

Average reading age of participant group in June 1999 -----	9:0
Average reading age of participant group in June 2000 -----	10:8
Highest individual reading-age gain -----	2:7

Aspin Park C.P. School, Grimbold Rd, Knaresborough HG5 8HD

Average reading age of participant group in June 1999 -----	8:9
Average reading age of participant group in June 2000 -----	9:6
Highest individual reading-age gain -----	1:7

Castle C.E. Junior School, Stockwell Rd, Knaresborough HG5 0JN

Average reading age of participant group in June 1999 -----	9:3
Average reading age of participant group in June 2000 -----	10:3
Highest individual reading-age gain -----	1:4

St Roberts C.E. Primary School, Ainsty Rd, Harrogate

Average reading age of participant group in August 1999-----	8:5
Average reading age of participant group in March 2000-----	9:5
Highest individual reading-age gain -----	1:6

Western Primary School, Harrogate

Average reading age of participant group in June 1999 -----	8:5
Average reading age of participant group in June 2000 -----	9:3
Highest individual reading-age gain -----	1:1

Meadowside C.P. School, Halfpenny Lane, Knaresborough HG5 0SL

Average reading age of participant group in June 1999-----	9:0
Average reading age of participant group in June 2000-----	9:8
Highest individual reading-age gain -----	1:3

Brotherton C.P. School, Brotherton, Knottingley WF11 9ES

Average reading age of participant group in June 1999-----	8:3
Average reading age of participant group in June 2000-----	10:3
Highest individual reading-age gain -----	1:9

Woodfield C.P. School, Woodfield Rd, Harrogate HG1 4HZ

Average reading age of participant group in June 1999-----	9:0
Average reading age of participant group in June 2000-----	9:8
Highest individual reading-age gain -----	2:9

Freda Gardham C.P. School, New Rd. Rye. TN31 7LS

Average reading age of participant group in August 1999-----	8:8
Average reading age of participant group in March 2000-----	9:2
Highest individual reading-age gain -----	2:0

"One teacher has been ill and the project has not always been maintained."

Peasmarsh C.P. School

Average reading age of participant group in August 1999-----	7:10
Average reading age of participant group in March 2000-----	8:8
Highest individual reading-age gain -----	2:2

"The approach motivated the underachieving boys in the class this would be useful if we had a computer in the classroom."

Bodiam C.E. School

Average reading age of participant group in August 1999-----	8:8
Average reading age of participant group in March 2000-----	9:7
Highest individual reading-age gain -----	1:8

"The children really wanted to use the Electronic Library"

St Cuthbert's RC Primary School

Average reading age of participant group in August 1999-----	8:3
Average reading age of participant group in March 2000-----	9:3
Highest individual reading-age gain -----	2:1

"Some children commented that it made them want to read more."

Ysgol Pendorlan, Colwyn Bay

Average reading age of participant group in August 1999----- 8:7
Average reading age of participant group in March 2000----- 10:2
Highest individual reading-age gain ----- 4:5
The school provided no written comment but out of the 20 strong 'poorest reader target group' only 2 achieved Level 3 in reading all others achieved level 4/5

Builth Wells C.P. School, Hospital Rd, Builth Wells

Average reading age of participant group in August 1999----- 8:6
Average reading age of participant group in March 2000----- 9:3
Highest individual reading-age gain ----- 3:3
"The children enjoyed the experience of being independent readers."

Llanfaes C.P. School, Beilihelig Rd, Brecon LD3 8EB

Average reading age of participant group in August 1999----- 8:4
Average reading age of participant group in March 2000----- 10:3
Highest individual reading-age gain ----- 2: 7 mo
"The library introduced children to a range of texts and they were motivated by the printed feedback on each page."

Talgarth C.P. School, School Rd, Talgarth LLD3 0BB

Average reading age of participant group in August 1999----- 8:2
Average reading age of participant group in March 2000----- 9:1
Highest individual reading-age gain ----- 2:7
"We have 'bound' each completed book giving the child some tangible evidence of success."

Machynlleth C.P.School, Machynlleth, SY20 8AT

Average reading age of participant group in August 1999----- 8:10
Average reading age of participant group in March 2000----- 9: 10
Highest individual reading-age gain ----- 1:2
" All participating children enjoyed the library and were quite adult in their use of the scheme."

Ysgol Maesydre, Severn Rd, Welshpool, SY21 7SU

Average reading age of participant group in August 1999 ----- 8 :6
Average reading age of participant group in March 2000----- 9:10
Highest individual reading-age gain -----2: 7

Treowen C.P. School, Newtown, SY16 1NJ

Average reading age of participant group in August 1999-----9 :7
Average reading age of participant group in March 2000----- 10:10
Highest individual reading-age gain -----2: 8

Eastfield Primary School, Enfield, EN3 5UX

This school provided no end data but commented "*The children were motivated, enjoyed reading their books and were keen to finish and try other titles.*"

Chase Side Primary School, Trinity St, Enfield EN2 6NS

Average reading age of participant group in August 1999 ----- 9:1

Average reading age of participant group in March 2000----- 10:1

Highest individual reading-age gain -----2 :1

"We didn't start using the approach until the end of October but it was very popular with the children. Excellent for encouraging independent learning.-"

Partingdon Primary School, Central Rd,Urmston, Manchester, M31

Average reading age of participant group in August 1999----- 11:10

Highest individual reading-age gain -----3: 9

"The children have enjoyed their reading sessions in which misspelling a word can be made fun not a problem. In this 'poorest-reader' group, expected to achieve only Level 3 in reading, only one child achieved Level 3 six achieved :Level 4 and the remaining five achieved Level 5!

Cherry Manor Primary School, Sale M33 4GY

Average reading age of participant group in August 1999----- 8:10

Average reading age of participant group in March 2000----- 9:10

Highest individual reading-age gain -----1: 9

"The idea that children make their own mistakes by themselves and not in front of others is very important for their self-esteem."

East Whitby Primary School, Stainsacre Lane, Whitby YO22 4HU

Average reading age of participant group in August 1999 ----- 8:2

Average reading age of participant group in March 2000----- 8:9

Highest individual reading-age gain -----5: 8

"A good approach dependent on access to hardware. Range of titles is impressive."

Gladstone Rd Junior School, Scarborough YO12 7DD

Average reading age of participant group in August 1999----- 8:3

Average reading age of participant group in March 2000-----9 :6

Highest individual reading-age gain ----- 2:0

"The Electronic Library certainly stimulated the readers.. One boy who hated reading before the project couldn't get up to the computer fast enough."

Eastwood Junior School, Leigh on Sea SS3 0HQ

Average reading age of participant group in June 1999 ----- 7:10
Average reading age of participant group in June 2000 ----- 8 :8
Highest individual reading-age gain ----- 2:6

Darlinghurst Primary School, Pavillion Drive, Leigh on Sea

Average reading age of participant group in June 1999 ----- 8:6
Average reading age of participant group in June 2000 ----- 10: 2
Highest individual reading-age gain ----- 3 :8

Edwards Hall Junior School, Bosworth Rd, Leigh on Sea

Average reading age of participant group in June 1999 ----- 8:3
Average reading age of participant group in June 2000 ----- 8 :11
Highest individual reading-age gain ----- 1:7

"We have definitely noticed a marked improvement in confidence and fluency over the year which leads us to doubt the accuracy of our first tests.."

Bournes Green Junior School, Thorpe Bay, Essex

Average reading age of participant group in August 1999 ----- 8:4
Average reading age of participant group in March 2000----- 9:5
Highest individual reading-age gain ----- 1: 9

"We have 'bound' each book as it was completed giving the child some tangible evidence of success. The very children who need to read every day but do not have the support at home to do so, now do so at school, routinely"

In this chapter I have endeavoured to provide clear and unequivocal evidence that the Hot Reading strategy described really does work and I hope that anyone challenging this evidence will do so by contacting me at eddiecarron@btconnect.com The failure of government to respond to the very clear implications of this project reflect the absence of a clear route from research to practice in Education which is the norm in proper professions.

For those who prefer to learn by experience, I will describe in the next chapter how anyone can conduct their own research and provide all of the resources necessary for them to do so. If you follow the instructions recommended, you will undoubtedly achieve the same level of gains in reading skills.

Chapter 5

The primacy of phonics teaching as a credible remedial reading strategy still resonates in the empty chambers of the minds of those who are determined to persist with a demonstrably failed strategy, however many children it consigns to the scrapheap of illiteracy.

Proof is a repeatable experiment and this chapter seeks to explain and demonstrate how you can personally test the ideas proposed in this publication for yourself. Everything you need is provided. The reading materials are provided and the approach is explained.

We specifically claim that if you follow these simple instructions for one term, your poorest readers' reading difficulties will be largely resolved and in one academic year, their reading ages will be in line with or higher than their chronological ages.

I would happily take on any group of primary schools with poor literacy predicted Key Stage 2 results and guarantee to raise their results to significantly higher than the national average (Level 5) in just one school year. The 'guarantee' would mean that I would receive no payment whatsoever if their results failed to significantly exceed the national average. I would of course expect to be paid a teacher's salary for the year if I succeeded. Any interested Chief Education Officer keen to be the first LEA in the UK to achieve universal literacy should contact me without delay!

I have claimed that all that it takes to make a good reader is a daily dose of reading success and hopefully, provide the evidence which supports this claim. It is important to note that it is not merely practice that makes perfect; it is successful practices! I could tinkle with my forefinger on a piano every day for hours on end but this would never make me a pianist. Only repeatedly successful practices can achieve this and that is the key to success as far as skills acquisition is concerned. This chapter provides the knowledge to guarantee that the reading standards of even the very poorest readers can be raised to an acceptable standard.

The first thing you must do is visit the website at www.schoolwork.bz where you will find a number of literacy boosting programmes. This exists because it is central to my current research project but it will be withdrawn when the project is over. The resources available there are of course commercially available. The resource used by the school in the Blakeney project is the Library. Open the Library and you will see a vertical bookshelf. Scroll down the titles and you will see that there are one hundred and ten titles displayed against different coloured backgrounds. The colours represent different levels of intellectual challenge. Level one is the least challenging level.

Click on any title then open the first chapter. You will see displayed on the screen, the text of the chapter in soft focus with only the first word standing out sharply to catch the reader's eye. You should be wearing a simple headset. Touch the spacebar and you will see that each spacebar touch advances the focus by a single word. Touching any of the letter keys will cause the word in focus to be voiced. This facility

means that any child, no matter how severe his or her reading difficulty, will be able to progress through the text with guaranteed understanding because he or she will not have to try to consciously decode any unfamiliar words.

After completing the first read-through, the programme conducts the pupil through a second read-through. This mimics the way that any intelligent adult would deal with a passage they will have to read aloud to a listener. During this second read-through, the computer will voice only those words which caused the pupil some difficulty.

When the second read-through has been completed, the programme will list the words which caused the pupil some difficulty and invite him or her to identify these words as a means of promoting and internalising their recognition. The programme voices these words in random order and invites the user to click the mouse on the word to be recognised. When all words have been identified, the programme offers the pupil the option of reading through the text again or of producing a printout. Pupils will have been made aware by their teacher that an error-free reading is expected of them and if this has been appropriately impressed on them a small number will opt to read the passage through again.

When the 'Printout?' option is selected, a book quality printout of the text is produced and the user is taught to retrieve the printout and place it in his or her reading folder. At some convenient point later in the day, pupils are required to read their passages aloud to a teacher or teaching assistant. As a natural consequence of the computer assisted preparation, this will be a routinely successful session in which the pupil makes few if any reading errors. It is this routinely successful reading experience which restores pupils' self-confidence in their own ability to learn to read. Within this routine, the child has the opportunity to acquire the quantity and quality of reading experience which is necessary to ensure that the child's reaction to text becomes a reflex response leaving their consciousness free to assimilate the intellectual content of the passage. It is only this intellectual content which can motivate the child to develop a love of reading. It is very certain that phonic drills do not have this motivating influence.

The class teacher must make a professional judgement as to which Level a particular child should start with. If in any doubt, start with a Level 3 title and then move up or down as necessary. After a few weeks, it should be possible to leave each child to select titles as they would in an ordinary library. All children in the target age range (8 to 15) learn to use the library without difficulty. It is critical to the success of the approach that pupils are permitted to use the library **on their own without direct adult intervention or oversight**. It will be immediately apparent to any teacher if a child has not made any effort to read the passage correctly and it is at this point that the teacher has an opportunity to intervene. My research has shown that the vast majority of children take the computer preparation very seriously indeed and that in

the main, they will read their passage to a teacher or other adult with few, if any, reading errors.

If you teach even a small number of children who have access to a computer at home, far and away the most productive approach is to have the children complete the reading component of the strategy at home. They can then bring their reading folder to school to read to a teacher or teaching assistant. This should always be done with the co-operation and involvement of the parents who should be advised that the child must complete the work at the computer unsupervised and unaided. The parents should be encouraged to hear their child read their prepared texts from the printouts so that when the child reads them aloud at school, they will inevitably be error free.

To get started now!

1. Select a child or group of children with poor reading skills in the target reading age (9 to 15)
2. Make a record of their reading ages.
3. Show them how to use the library in a group session, including the fact that they are to place the printouts into their reading folder when they are finished.
4. Advise them that you will expect them to read their passages to you from the printouts with no errors. They must come to accept that this is your expectation.
5. Make the arrangements as to when they will carry out the computer part of the programme. Allow them to complete the work at the computer without an adult being present.
6. Make the arrangement as to who will hear them read their prepared passages.
7. After one term or about twelve weeks on the programme, re-assess their reading ages.
8. After one school term, no child on the programme will have a reading age of less than 9. At this point, the children should change to the Reading Comprehension Course which is also available on the website..
9. They will complete the Reading Comprehension Course in one term and at this point, their reading ages will be greater than their chronological ages.

There are no costs involved. Access to the library at www.schoolwork.bz is free. In general, it is good idea to encourage the children involved to access the online Library at anytime at home or when they are allowed to, at school. Make the online library as accessible as the school library.

I have appended a list of frequently asked questions which anyone contemplating a project of their own should read carefully. I will be happy to support anyone

carrying out their own research by answering any queries by email. There is no need for any child to graduate to secondary school with poor literacy skills when the means to ensure the adequacy of these skills is readily available. One of the advantages of this form of online publication is that unlike a conventional publication, its content is not cast in stone. It is my intention to add any constructive contributions by practitioners who have tried, or are thinking about trying, the approach in future editions. We undertake to add any constructive comment which may be useful to other teachers as they are received provided that an email address is included. Anonymous contributions will not be added.

Frequently Raised or Significant Points.

What is the reading-age for each of the levels in the library?

The levels in the library are not associated with a particular reading-age. They are simply a progression in term of the level of challenge presented by their intellectual content.

How should I decide at which level to start any particular pupil?

When you are more familiar with the library, you will not find this a problem. Until then, just start any child you are unsure about at a Level 3 title. If this proves to be too difficult, move down a Level and vice versa. The important point is that you always leave the child entirely alone at the computer.

At what point do I move a child up a Level?

In general terms, keep the child on the same Level for two or three titles until they are comfortable with the approach. Thereafter, allow them to select titles that interest them. When you are more familiar with the library content, you will be better placed to recommend particular titles to them.

How long will it take before there are noticeable reading improvements?

After just three or four sessions you will notice improved confidence in the way the child reads the passage aloud from the printout. After about two weeks you will notice improvements in reading generally. Significant measurable, reading age gains of about a year take about three months. Bringing reading-age into line with chronological age takes about a full school term where the initial reading-age deficit was about two years.

Children do not read one word at a time as the programme does. Do they?

No they don't. This programme is not for children that can read. It is for children with reading difficulties and this is exactly how such children read – one word at a time. When they are reading the passage aloud to a teacher is when reading fluency has a chance to develop.

I don't really understand how this works!

It is only really successful reading experience that can improve reading skills and the Hot Reading technique is the closest thing a poor reader can get to real reading. Reading is silent; it is asocial and it is a receptive activity (*see chapter 2*). Most other so-called 'remedial' approaches involve another person, usually a teacher, and that makes it impossible for the aspiring reader to gain real reading experience!

What would you recommend after the library?

The Reading Comprehension Course was designed specifically as a follow on from the library. I would also recommend that other literacy skills boosting work is carried out in parallel with the Reading Comprehension Course to enhance, writing, spelling and grammar skills etc. Such a resource is freely available on the website at www.schoolwork.bz.

Can I listen to the reading from the computer screen to save printing costs?

No. This is actually counter-productive yet on visits to schools I find many teachers doing just this. On one visit, I found a visiting advisory teacher sitting on a chair behind a child at a computer. While he was 'reading' she was leaning over his shoulder pointing to words on the screen and saying 'What was that word?' What a waste of time and effort and what a shame for the child she was 'teaching!'

How can I link their library work with other curricular activities?

Again, this will become easier as you become more familiar with the library. In time you will be able to create groups of titles for your pupils to read in support of other work you may be doing. The free online resource has only 110 titles whereas the full library has 300 titles covering every conceivable topic of interest to children.

What is the best time to start pupils on the Library?

Ideally start them in Year 4 or 5 and in Year 6 you can move them on to the Reading Comprehension Course and General Literacy Skills Booster Course which uses the same principle and boosts all literacy skills and is also available on the site. When using the library with poor readers in Year 4 it is best to limit each session to one single chapter.

Should I use this approach with dyslexic children?

Whatever the cause of a child's reading difficulty, in order to become a reader his or her reaction to text must become reflex and the library is the only guaranteed way of achieving this. If however, you have pupils who have been diagnosed as dyslexic and a particular remedial approach has been prescribed by an Educational Psychologist or other literacy expert, I would recommend that you follow that prescribed course. You may have a legal obligation to do so even if it is not proving productive. Certainly, this approach has been used successfully with many children who had been described by teachers as dyslexic.

How many chapters should the child read each day?

The minimum is one, but some schools make a practice of having their children complete whatever they can in a specific period of time such as half an hour. A small number of schools, in the second term of using the library, had their children complete a full title at a single session. When children complete the computer part of the work at home, they invariably complete a title at each session.

How often should I test the child's reading?

At the end of each term, a test should be applied informally and be stress-free. Remember that the point of the test is to assess the effectiveness of your teaching and not to measure the child's ability because no child's ability can be measured by something as simplistic as a reading-age test. Reading-age tests are great for measuring progress but are really only a very rough guide to reading ability.

What value is there in involving the child's parents?

Enormous value! If the parents are co-operative, involve them. Get the child to take his or her reading folder home occasionally to read to parents. In one research project completed a few years ago, the groups completing the reading exercises on their own computers at home significantly out-performed those completing them in school. We would strongly recommend that where a child has access to a computer at home, its use for this purpose should be encouraged. The library is just as available on line at home as it is in the school and it makes sense to take advantage of this fact because it encourages the involvement of the child's parents.

If this strategy is guaranteed to resolve reading difficulties why is it not recommended by the Education Authorities?

I have no idea what the answer is. Perhaps you could ask them yourself? It is almost as if they prefer to have a large number of children leave school illiterate every year! This is neither inevitable nor necessary. Governments appear to believe that the more money they throw at a problem, the more likely they are to secure success. The currently support Reading Recovery which is rejected by every other English speaking country including the country of its origin, New Zealand. The cost is about £5000 per child. The Hot Reading approach which guarantees success costs nothing and that is something which politicians can't get their heads round!

Is this approach designed solely for use in schools by teachers?

Yes it is. I have another resource for parents who are tackling their own child's reading difficulties at home. There is a small charge for this Home Reading Teacher course but it includes ongoing professional guidance by email. Take a look at this site at www.readingteacher.org.uk Most of the now several hundred parents world-wide using this site come from teacher recommendations and to date, not one of them has reported any dissatisfaction with the results they have obtained.

What is the earliest age at which the library could be used?

I know of two schools which use it with children in Year 4. These schools did so experimentally and allowed the entire class access to the library. Not just those with reading difficulties. Both schools recommended this approach. Most schools start using it in Year 5.

What difference is there between the free online library and the Electronic Library 300?

The purchasable library has 300 titles as opposed to the 110 in the free online library. It also has an integral spelling component for the unfamiliar words.

What is the Reading Comprehension Course?

This is a course of remedial reading exercises which are longer and slightly more demanding than the individual passages in the online library. At the end of each session, the programme poses a series of questions designed to assess literal and inferential comprehension.

How long should children continue to use the library?

As long as they wish! Ideally, they will move over naturally to the use of the 'real' books in the school library but this transition should not be a forced one. Let it happen naturally.

Are the gains in reading skills accompanied by gains in comprehension?

This course improves the skills component of reading. If the child's understanding of language is unimpaired, comprehension will match reading skills. If the child has impaired mental functioning, this course will not improve their understanding. I had a very enthusiastic report from a parent of a Downes Syndrome child who was ecstatic about the gains in her daughter's reading skills. Ultimately of course, her reading reached a ceiling when it came to reading words which were outside her receptive vocabulary. There is no intellectual component in the acquisition of a skill but there is intellect involved in its application. Each word read triggers a complex, dendritic, cascade of associations within subconscious memory. The extent of these associations determines the extent of comprehension. Words are the trigger for these associations whether they are heard or read!

What is the distinction between 'reading' and 'reading aloud' and why is this important?

It is important precisely because so many teachers do not appreciate the fact that the two activities are very different. Reading is receptive and anti-social. Reading Aloud is expressive and socially interactive. The learning reader needs 'reading' experience and reading can only be done 'solo' - you cannot read and think about something else; you cannot read and interact with another person at the same time. The whole point of this approach is that it routinely provides poor readers with the experience they need most viz. the experience of reading receptively because it is only within this experience that the chaotic grapheme/phoneme correspondences can be

assimilated. This is an important question because it touches on the foundation mechanism of learning to read. Reading is not an art form, it is a skill! You cannot learn to drive, to play the piano or to juggle three flaming clubs by simply learning the rules of these activities. They are skills and skills can only be acquired by practical experience!

What is the impact of this reading strategy on spelling skills?

Those of us who are good spellers are good spellers because we remember what the words look like, not because we know all the spelling rules. The reality is that the grapheme-phoneme correspondences in English are so chaotic that there are no spelling rules worthy of the name. Even the much used ‘i’ before ‘e’ except after ‘c’ has so many exceptions that it is virtually worthless. Some notable exceptions are ‘weight’ and ‘neighbour’ and there are others! The more an individual reads, the more likely it is that s/he will recognise individual words and remember what a correctly spelled word looks like! Most people get by in their daily lives with an expressive vocabulary of around two or three thousand words and remembering what these words look like is not the gargantuan task that many people imagine. It is worth remembering that in languages such as Chinese and Japanese, there is no phonemic clue in the text as to how it is spoken. Each character has to be learned and remembered visually. This is not the case in most alphabet based languages where there is a single grapheme-phoneme correspondence but uniquely in English, the graphemes give only a few clues to their associated phonemes.

What is different about the 20% who do not learn to read intuitively?

There is nothing ‘wrong’ with them and this approach proves this fact. Providing they have no obvious mental impairment, they will learn to read intuitively. Certainly there is something different about the rate at which they assimilate discrete visual images such as words. That ‘difference’ dictates that they will need several successful encounters of all of the irregular words before they are internalised. Einstein and many other similarly brilliant people had this ‘difference’ but it did not detract from their genius.

One of the main literacy deficits is in writing skills. Does this help?

Yes. Inevitably it does. Speaking is the foundation literacy skill and reading comes a close second. As reading skills improve, so too do writing, spelling and the other literacy skills. To boost these other areas of literacy we provide a strategy dedicated to boosting literacy skills in general on the free website. The small Gloucester school participating in the current literacy boosting research is using this approach alongside the library and the Reading Comprehension Course. It is based on a series of dictation exercises completed over one term at the rate of two per week. These are ‘Hot Writing’ exercises which routinely provide experience of sentence construction etc. It is important to remember that dictation, unlike simple copying does involve intellectual processing. I will try to encourage the Gloucester primary school to add

some comment on this important aspect of their research work at the end of the project in the summer of 2010.

Will the free website remain free into the foreseeable future?

No it won't. The reason for its existence is research and when the current research project is over, its funding will cease and it will be closed. If there was sufficient demand, I would make it available as a subscription resource and I would hope eventually to expand the range of literacy promoting courses on the site and bring the range of titles in the online library up to three hundred. I cannot personally sustain the costs of the site beyond the current project.

What is the purpose of the Dictation Course in the 2010/11 research project?

The 'Hot Reading' approach is effected using the Electronic Library and the Reading Comprehension Courses. These courses improve reading skills dramatically but do not directly address the other literacy skills of writing, spelling, grammar and in general, the ability to express thoughts in writing. The Dictation Course provides 'Hot Writing' experience of a type not otherwise available to those with limited literacy skills.

Surely you are not advocating the teaching of 'sight' words?

No. I am definitely opposed to the teaching of 'sight words'. There are too many unproductive labels of this kind in Education, created by people with little or no training in this field. I take it for granted that all competent and experienced readers will instantly recognise thousands of words 'on sight' by virtue of the quantum of their reading experience. I believe also that this internalised 'database' of discrete word images serves individuals as a reference resource when spelling or decoding unfamiliar words. My approach does not teach sight words. It teaches nothing! It simply provides a means within which, even the poorest readers can experience 'the joy of reading!' and that it is this experience which works its remedial magic.

There is a belief that illiteracy is an inevitable consequence of low socio-economic status and has little to do with poor teaching.

I hope to have shown that reading is a skill and therefore its acquisition is entirely independent of intellectual capacity. I cannot imagine any factor in low socioeconomic status which would impact negatively on the ability to learn to read other than perhaps motivation. I have tried to show that motivation to read can only come from the intellectual content of the reading material and not from the child therefore it is important that the intellectual content of the text selected for children are likely to excite their interest. Certainly there are many alternative electronic distractions that are likely to excite children's interest other than books.

What about dyslexia?

There is no doubt that dyslexia exists in all populations and that it impacts on the way some people learn but it is not a clearly defined condition. What we know for

certain is that dyslexics in countries with a regular orthography do not experience any difficulty in learning to read since literacy in such countries is virtually universal. This is not a point of view that is popular in the dyslexia industry but it is nevertheless, an unavoidable truth.

Is reading really just a skill like juggling or knitting? I find that hard to swallow!

No. It certainly is not. Reading is (1) the retrieval and (2) the assimilation of the intellectual content (or meaning) of text. The first part or 'retrieval' is undoubtedly a skill. The second part, the 'assimilation', is an intellectual process not a skill. It is worth noting that all skills have in common the fact given a sufficient quantity of practice, they become reflex, ie they are completed without conscious instruction. It is this factor that identifies them as a skill! This does not mean that all skills are the same. They are not. Some skills require high levels of hand-eye co-ordination. Some require no physical co-ordination whatsoever but they all require successful practice in order to achieve the reflexivity which is the key component of any skill.

Some level of skill must exist before it can be improved!

That is true. The 'Hot Reading' approach is not suggested as an initial means of teaching children to read. It is offered as a means of restoring the reading deficits of those whose reading is not making progress and 'normal' rates. Such a lack of progress suggests that the techniques by which most children learn to read are not working with the children and another approach is called for or these children will certainly fail to become competent readers. The 'Hot Reading' approach teaches nothing. All it offers is a way of ensuring that poor readers can have the extra quantity of reading experience that they require in order to become good readers and if used as recommended, it always works.

Is Hot Reading a 'phonics' or a 'whole word' approach?

The idea that there are two fundamentally different approaches to the teaching of reading with the labels of 'phonic' or 'whole word' is a perspective which has been inflicted on teachers by pseudo-intellectuals with limited training, experience or understanding of the reading process. An alphabet-based orthography provides a system of graphemes (letters) linked to specific sounds (phonemes) consequently some understanding of the correspondence between the graphemes and phonemes is an essential part of becoming a competent reader. The way in which these correspondences are 'learned' however, is not absolute. The way they are internalised is by successful practice and that is also variable. Some children will learn irregular words in a few encounters; some will require dozens of encounters before the same irregular word is internalised. Those who propose a 'whole word' approach to the teaching of reading, presumably support the teaching of lists of individual words. I would regard that as crazy in alphabet-based languages. The number of words in the English language is hundreds of thousands! Those who have lots of reading experience, internalise a large number of words which they can recognise reflexively

without the need to decode them. They use this internalised database in reading and in spelling and also as a reference when decoding unfamiliar words. When competent, experienced readers are reading, the number of unfamiliar words which they would have to decode is probably fewer than 5%. Hot Reading is not really a 'teaching' strategy since it doesn't actually teach anything. It merely provides a means by which the poorest readers can acquire reading experience within which, even very limited reading skills will inevitably be enhanced. There will be strong positive correlation between the degree of enhancement and the quantity of experience.

Would it not make sense to accompany the Hot Reading approach with phonics exercises?

No. It would not. Phonics is the best way to teach reading initially because a good phonics programme produces the highest proportion of readers but it still leaves a significant number unable to read. This approach is specifically for those for whom a phonics approach has proved to be ineffective therefore it makes no sense to carry on with exercises which have already failed. Practical research shows that this approach works perfectly well without phonics exercises.

Do you believe that the Hot Reading approach will restore all reading deficits?

No. I do not. About 1.5% of the population of any country will never be competent readers because of some degree of mental abnormality. This applies whether the orthography of the language is completely regular or completely irregular. About 20% of the populations of all English speaking countries fail to become competent readers. I believe that the use of the Hot Reading approach could raise literacy standards to almost the same as all other countries ie. around 97.5% The chaotic nature of our orthography probably means that our literacy rates might never quite reach those of countries with completely regular orthographies.

You claim that you could raise the standards of the worst performing primary school to above the average national standard. Is that a genuine offer?

Yes. It is. I would charge a fee of £1000 which would be payable afterwards only if their Key Stage 2 results in English would be well above the national average. I would visit the school. Provide the resources. Train the staff and advise them at intervals on a course of action of any specific cases.

You insist that children should work on their own at the computer without adult supervision or intervention. Surely it would be helpful to have an experience adult helping the child?

No. It would be the opposite of helpful. It would be seriously counter-productive. Reading is a silent, anti-social activity involving only the reader and the reading material. The presence of anyone else interferes with that process.

What will you be doing in the 2010/11 literacy project?

I will be seeking to raise literacy standards in a very large sample of pupils as measured by the Key Stage 2 English results. It is my hope that Level 3 (the below average level) will be almost entirely absent from the sample and that Level 5, the above average level will be the most commonly occurring. The aim is to demonstrate that literacy standards in English speaking countries can be raised quite easily to the same standard as those in other languages and at no significant cost.

Who will be allowed to participate and what will be involved.?

Any teacher of Year 6 children can participate. We will supply three literacy resources on CD at no cost to the school whatsoever. Teachers will be expected to use these resources over the first term of the 2010/11 academic year. This will take between 20 and 30 minutes each day. We will be totalling and averaging these outcomes for all participants. No individual or individual school's results will be published and all normal constraints of confidentiality will be observed.

How about Synthetic Phonics?

Synthetic Phonics simply means teaching children the sounds the letters make. English is an alphabet-based language and therefore it follows that children must learn the sounds the letters make. If children are not taught the sounds the letters make, some will learn to read anyway but many of them will experience great difficulty in learning to read and some may never learn at all. It is sensible that all children should be taught the sounds the letters make but it is inevitable that some of them will still fail to acquire good reading skills. This simply means that these children should be given an opportunity to learn the sounds the letters make by some alternative strategy. The fact that they are not currently offered a successful alternative strategy is the reason why one fifth of children do not become even functionally literate.

I hope you have found the contents of this publication interesting, useful and above all, thought provoking. I will be happy to respond by email to any queries or constructive criticisms and to publish these in future editions unless the authors expressly forbid the publication of their views.

Email me at eddiecarron@btconnect.com