Talking, Reading and Writing

How children learn to read, and how practitioners can help them

Learning to read, spell and write is as simple or as complex as we want to make it. After all, if a six year old can learn it, then it must be simple. But if the process goes wrong (and it can quite easily!) then everything becomes very complicated indeed.

Two points before we start:

- In the UK, children are started on the reading and spelling process very very young - and in my opinion too young.
- English is the most difficult language to spell and read in the whole world (Swedish is second most difficult. Somali is the easiest, followed by Spanish, Italian, Czech and Polish!)

So it is not surprising that there are many children and adults in the UK who find reading and spelling difficult.

How do we learn to read? Let's start by saying that it is a whole-body experience. We need to use our brains, eyes, ears, mouths, our limbs, and our hearts (and if it's a scratch-and-sniff book you are reading then you will need to use your nose as well!)

Let's start with our **hearts**.
For children to learn anything they need to be *emotionally secure*. This means that they need to be happy as learners, to believe that it is fine to experiment, and that they will be praised for their efforts and have their successes celebrated.
Children also need to be *emotionally involved*. They need activities that stimulate their imaginations, which are funny, sad, and possibly just a bit scary. Most importantly they need adults to make them feel secure and to interpret these feelings so that they are make sense and are memorable.
Our **brains** are essential for interpreting what we feel through our senses, and for making sense of complex information; e.g. for helping us learn that black squiggles on a page mean something, and as we see squiggles that look the same, we remember these and come to learn that they have the same meaning.
Reading is essentially a visual process, so good **eyesight** is important. We also need to be able to understand what we see, and to be able to *track* visually. In English we track with our eyes from right to left, but in other cultures tracking is from left to right (Arabic, Hebrew) and in others from top to bottom (Japanese). We need to be able to pick out visual *patterns*, as reading is essentially a visual pattern.
The link between our **mouths** and **ears** is vital for learning to spell. We need to learn that a sound that we make with our mouths can be written down, and will have meaning as a letter on its own, and that these letters can be linked together to make up words. Without this *phonological awareness* children cannot learn to spell.

Finally we need our whole bodies: not just our hands and arms for writing, but it helps to be able to move in a zigzag, or a straight line, or in a circle, so that we can quickly learn how to make these movements with our hands and fingers, and talk about them as part of learning to write.

And finally, we need to have well-developed language, so that we can have a way of communicating about learning to read and write!

Learning to read

What follows is based on an interview with Martti Martens, a Swedish reading and dyslexia specialist. It might be *visually uninteresting*, but I hope the content will stimulate your brains!!

MM Before they start school, most children have absorbed an enormous amount of information about language and reading, and a wide range of skills that they need as the foundation for fluent reading and writing. These skills develop as soon as they start to learn to speak, and come about naturally through interacting with parents. This is especially true where parents are confident readers, and where children are encouraged to share books.
Playing with language is also vital for developing the key skills for reading: *phonological awareness* and processing.

MJ Can we take a closer look at phonological awareness?

MM As soon as a child starts to speak, he is showing some awareness of how words should be pronounced, as speech sounds in a word, and this is one aspect of phonological awareness. As he grows he starts to play with words, encouraged by his parents. When adults accidentally (or on purpose) mispronounce words, and the child says, "No Daddy you must say 'shoe', not 'soo'!" he is already showing a high degree of phonological awareness. He recognises that there are such things as 'words', and that words are made up of sounds (which we call *phonemes)*. He also starts to understand that sounds are arranged in certain ways: to create words that are meant to express meaning. Of course he might not have the language to express these ideas (after all he's only three!) but he is showing that he has the awareness of how we use sounds in our language. This is one aspect of *phonological awareness*, and without this the child might experience difficulties in becoming a fluent reader. But he still might be showing that he has good vocabulary development, which is vital for reading.

MJ Is rhyming important?

MM The ability to recognise that two words rhyme is another of the key features of phonological awareness. It's a complex skill, but most young children seem to do it effortlessly. When a four year old girl says," Listen Mummy, 'bar' and 'car' sound the same" she is showing that she can hear the difference and similarities between two words, based on her ability to segment the words into sounds. Furthermore, she is beginning to talk about language in an abstract way, showing that her 'phonological thinking' is developing. These are incredibly complex processes, and an amazing feat for such a young child. As teachers we spend many years developing this awareness and these skills in older children for whom this process does not come naturally, and who are struggling as readers in school.

But there's more to the reading and spelling process than phonological awareness, and we need to look at this now.
The first stage of learning to read is when children take an interest in words as images. So for example they quickly recognise the logos of shops like TESCO and McDonald's. This is the *logographic* stage. Then through processes of *phonological decoding*: breaking down words into sounds and matching them to spoken words, they start to remember words as whole shapes, and this is the *orthographic* stage. These are important skills, and fluent readers use orthographic – whole word (not to be confused with *logographic* reading) – methods all the time.

For many children, learning these skills are almost effortless, while for others they can take many years to establish. However we need more than these skills to become competent and confident readers and spellers.

MJ So reading and spelling are the same process?

MM I prefer to think of reading and spelling as two sides of the same coin. To read, you need to be able to *decode* words – break them down into individual sounds, or *phonemes* and then try and make sense of them from your vocabulary, or *lexicon*. In spelling we *encode* words: we build them using the individual phonemes as building blocks to make up words.
Children with reading and spelling difficulties can have problems in one, some or all of these areas. A typical problem is where children have learned some of the basic skills of the reading process, but cannot make sense of the whole process to use it effectively. A perfect example of this was a seven-year-old boy in Sweden, who had been judged by his teacher to be a 'good reader'.

When I assessed him, we discovered that his phonological awareness and skills were in fact very poor. What had happened was that he had memorized words by their shapes, logographically, but was unable to decode words that were unfamiliar. His spelling also turned out to be poor, as he could only spell words that he had memorised. He needed a lot of support with listening and developing phonological awareness to ensure that he understood how to use the skills to be able to read.

MJ So it's possible for children to have isolated skills and, therefore, have underlying reading problems. I could see how teachers could miss this.

MM That's right. Children want to learn to read, and they realise it is important; so they use whatever skills they have to make sense of the reading process. If one way, say decoding words by listening to the individual sounds, doesn't work because they have weak phonological awareness, then they will use another skill: in this case relying on visual memory. He was a bright boy with a very large oral vocabulary and he was a completely logographic reader, and not using any phonological clues at all. It is essential that children understand all of the processes of reading so that they can 'see the whole picture', and are able to use the different skills, including orthographic reading. Without this total understanding of the concept of reading, and especially phonological awareness, they cannot become fluent and confident readers.

MJ But a fluent reader reads words from memory and recognises them as a whole.

MM That's true, but the only way to get to this position is through phonological reading in the first place. When you are a 'whole-word', orthographic reader, you can use, whenever you need to, your knowledge of speech sounds and how these are used in words to make individual sounds (*phonemes*), syllables, and whole words (*morphemes*). In other words you can use your phonological skills. You do it instantly, but it may have taken you some time at school, and lots of practice at home, to get to this point.

Let me give you an example to show how the process works, and then we can have an idea of what can go wrong. When a child begins to read the word 'lamp', first of all he will begin to break it down into the phonemes 'l-a-m-p'. As long as he has this word in his vocabulary, he will be able to read the word. But after, let's say 15 times, he doesn't need to 'sound out' or decode the word. He can now recognise it *orthographically*. He has elevated the word to part of his whole word reading, through practice. But when he comes to a new word, like 'lampshade' he will have to break

down the word again and go through the whole process. But by the time he gets to the 'l-a-m-p-sh…' he may have realised what the word is. This process is slow at first because of its complexity but advances rapidly if the child has good phonological skills as a foundation. As fluent readers we do this all the time, automatically.

Most children enjoy doing this: it's a challenge for them, but an enjoyable challenge. So you become an automatic reader, and you don't have to read all of the words in the text. You start to 'read between the lines' and are free to think about the meaning of the words, what the story is about and all of the other aspects of reading that we learn about in school, and come to enjoy. But for more than 20% of children they need to have some type of intervention that will help them move through these stages.

MJ Before we come onto the 20% can we spend some time looking at memory, and how this is involved with the reading process?

MM We make a distinction between *short-term memory* and *working memory*. Activities involving short-term memory need an instant response. So if I ask you to repeat the number string 3674521, you will be using your short-term memory. But if I say to you, "which word is longer: 'banana' or 'horse'?" You will need to 'elaborate' on this information: you will need to do some work on it by using your phonological knowledge of the words, remembering and comparing. This is using your working memory. This type of exercise has enormous potential for phonological working. The better the child's skill, the less he will have to use working memory, and the easier the reading process becomes: and more enjoyable. The more you have to use your working memory when reading, the harder you have to work, then the more you lose attention. So readers need to practice underlying phonological skills so they become automatic.

Talking with Martti Martens 2: How problems arise with reading and spelling.

MJ Let's talk about children with reading and spelling difficulties now: the 20% you mentioned earlier. How do problems arise?

MM One of the major stumbling blocks for children in the UK and Sweden is that our languages have very complex spelling patterns. They are known as having a *deep orthographic transparency.* We call them 'deep ' languages, because many of our written words bear little resemblance to how they are spoken. A typical example is the word 'cough'. This could be written in so many different ways, but the standard spelling is quite bizarre, if you look at it closely, and especially when you try to spell words that rhyme with 'cough', like 'off'. It's very confusing. Children, and anyone learning English as an additional language, just have to learn that this is how it is spelt. It makes the reading and spelling process a challenge.

However languages with a more *shallow orthographic transparency,* like Finnish, Italian and Spanish, have letter/sound correspondence that is considered to be quite regular. A friend and researcher in Finland even suggests that Finnish children in general don't need specific training in phonological skills at all due to the regularities in their language.

MJ This must make life difficult for Swedish and English teachers as well.

MM Very much so. Children start school with varying degrees of understanding of what reading is about. Some will have specific problems, e.g. dyslexia, or a history of earlier speech difficulties or hearing loss. When a teacher works with a whole class, she needs to work with all children from the same starting point, and with the same approach. This means that she might make assumptions about children's knowledge that are incorrect.

Because children want to please their teacher, and be seen as 'good learners', they try to make sense of reading as quickly as they can. Many children become very confused, or learn parts of the process without understanding the whole. Here's an example. A teacher says to a 5 year old, "What does the word 'bird' begin with?" The little boy thinks and answers," I know: 'beak'. And it ends with 'tail'!" We can see that this child has no concept of what 'sound' means in the context of reading, or the concept of 'word'. He will need a lot of individual support to bring him to this important point of understanding, even before we can think about introducing him to reading and thinking about letters and their sounds.

MJ But there will be children in the class who have all these concepts, and are ready to work on the formal aspects of reading.

MM That's true, and I recognise that teachers have a very tough job, and particularly in identifying children who will need more support. But it is still vital that we begin with all children developing basic listening skills and making sure that everyone understands the concepts. I'm going to stress this, because this is how problems of late identification of reading difficulties can be avoided.

I know children in the first two years of schooling who have poor phonological skills, perhaps because they had a hearing loss when they were younger. They are trying to learn to read, but can't make sense of the way that speech sounds correspond to letters. So their brains tell them, "This is not making sense! Use some of your other skills!" This is likely to be their visual skills, so they will learn words as whole images, *logographically*, or memorise whole words using various clues, like the first letter or the whole word, *orthographically*.

Often children will use a mix of visual strategies, creating hybrids of images and letter- sound correspondence and letter names. They have to use a lot of working memory, and can become quite exhausted and de-motivated. But crucially they will seem to be 'good readers' because; at least in the early stages of learning to read, they are able to convince their teachers that they understand what reading is about. Only later, when the demands of reading increase, will we become aware that there are problems. Valuable time is lost, and children's confidence suffers.