



Developing skills, confidence, motivation and independence in reading and spelling: using Lexion interactive software at home

Abstract

This article explains in detail why children can fail to read and spell effectively, even though they may be judged to be 'good readers'. The interface between children's lack of phonological awareness and the complex structure of the English spelling system is seen to have a major impact on their reading and spelling difficulties. Unidentified reading difficulties can erode children's confidence and affect family life. Children with a history of glue ear may be particularly at risk of not receiving support in schools. Software that can identify needs and provide effective remedial programmes helps significantly. Lexion software has a unique feature that allows links between learning at home and school. This can promote independence and develop children's and families' confidence as learners.

Key words

Phonological awareness; glue ear; reading; spelling; Lexion.

By the time children leave primary school they are expected to have a 'good attitude towards reading' and be able to read and spell fluently, rapidly and accurately, and most can in fact do so (Rose, 2006). Children with severe difficulties with reading and spelling are likely to be identified relatively early, although the process of deciding what remedial programmes are appropriate and how to resource support can take longer. Whether a child with reading and spelling difficulties will be eligible for additional support is usually determined by teachers, who will typically assess children's literacy using standardised reading and spelling tests. A significant gap on a reading test between a child's chronological age and his 'reading age' will often determine whether or not support is allocated, and whether it will come from within the school's resources or from external agencies such as educational psychology or learning support services.

Relying on standardised reading and spelling tests can lead to a significant number of children with

serious reading and spelling difficulties being ignored. These children may appear to have good reading and spelling skills, but in reality have very limited understanding of the process. Anecdotal evidence from parents describes these children being at risk of losing confidence, having very low self-esteem, disliking school, and becoming anxious, often with disrupted sleep. This can have a serious impact on family life. Many families seek the support of private tutors which, if properly targeted, can be beneficial but can also create dependency. Parents' own anxiety increases towards the end of primary school, when it is generally assumed that their children will have had their 'last chance' to develop reading and spelling skills through formal teaching.

Evidence from practitioners in Sweden indicates that there are clear reasons why such children are likely to be missed, and consequently fail to become effective readers and spellers. Because children want to be seen as 'good learners', they try to make sense of reading as quickly as they can. Many children

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become very confused, or learn parts of the process without understanding the whole (Martens, 2007). Research in Norway found that the key predictor of later significant reading and spelling problems was children's weakness in *phonological awareness*. This includes difficulty with discriminating between speech sounds, which can later lead to being unable to link a spoken sound to its corresponding letter in any given language (Høien & Lundberg, 2001).

The problem is compounded for UK children because the link between the spoken and written word, the orthography in English, is highly complex. The more demanding the orthography, the more one needs to develop children's ability to hear sounds and words, and understand the links between them; eg. whether a word is long or short, how many syllables it has, and how many sounds it is made up of. This is less of an issue in Italian or Spanish, for example, where there is a more direct correspondence between how a word is spoken and how it is written (Martens, 2007).

Often children with weak phonological awareness 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. Children may also show that they have learned the letter sounds, or phonemes, mechanically, but still don't understand the important concept that spoken words consist of speech sounds.

Learning can be complicated by the teaching system in the UK. Formal reading is taught earlier than in other countries, so children are often not ready to absorb what is being taught. Children can become confused when they learn letter names and sounds at the same time. Children will naturally develop visual forms of reading, and can recognise words as whole shapes: the logographic method. This is an important skill, but does not help when one meets an unfamiliar word and needs to break it down, or decode it. If a child only relies on visual recognition or logographic methods, then they will have difficulties with spelling, as they have not developed the necessary sound/letter knowledge (Jones, 2006; Martens, 2007). Reading and spelling, which should become automatic and enjoyable, and enable access to learning across the curriculum, becomes laborious and unpleasant for these children.

One particular group of children appear to be particularly at risk of having poor phonological awareness, and also of being either misdiagnosed as having dyslexia, or having the true severity of their reading and spelling needs ignored. Current research into the effects of developing 'glue ear' (otitis media) in pre-school years indicates that children are likely to fail to develop adequate phonological awareness, due to bouts of hearing loss. Children with a history of glue ear often experience delayed speech and language development, which can be an early indicator of lack of phonological awareness (Jones, 2007).

This difficulty with phonological awareness can remain throughout school, unless it is identified early and proper remedial help is put in place. Children often rely on visual methods of reading, and consequently have a very weak basis for confident and accurate reading and spelling (Jones, 2008). Medical intervention, including surgery, often leads to a radical improvement in the children's hearing. Consequently, teachers are unlikely to be aware of the potential impact that the hearing loss has had. Parents, however, become increasingly aware of the link between their child's early hearing loss and what they recognise to be major difficulties with the reading process. This can lead to dissatisfaction with the child's school, as they may be unable or unwilling to allocate resources or provide extra support in school.

The evidence from Sweden cited above (Martens, 2007) also identifies strategies for helping children, and particularly the major part that computer-based learning can play. One piece of software, Lexion, has been designed to specifically meet the needs of children with a range of reading, spelling and speech and language difficulties. It is entirely based on the concept that phonological awareness is the cornerstone of efficient reading and spelling. Lexion is used extensively in Scandinavia, and increasingly in the UK, and practitioners report that it is a very useful tool for supporting children through all the difficulties described above, and particularly focusing on phonological processing (Jones, 2006). Like other computer-based learning programs it is highly motivating, which is essential if children are to put in the necessary hours of practice. They are given regular feedback by the program, in terms of percentage achievement. There are large elements of repetition within the exercises, but the program adds subtle changes as the child progresses, introducing the important element of challenge.

Lexion assesses the child's spelling, reading and underlying phonological awareness. It generates exercises that help to build the foundations for efficient reading and spelling. After a series of 10

subtests of reading and spelling, which take approximately 10 minutes each, the teacher is immediately given a profile of the student's strengths and weaknesses, allowing them to find exactly where the problem is: in comprehension, reading, spelling or phonological awareness. The program then generates a series of exercises that focus specifically on the child's individual needs. The process of developing the key skills needed for reading and spelling can then start immediately. As well as having a vast number of games and exercises, Lexion allows users to make up their own exercises. Weekly spellings can be incorporated into the games, for example, and images can be downloaded from the Internet. This increases motivation and understanding, as the program can be tailor-made to suit a child's particular interests or needs.

Lexion has a key feature that currently makes it unique in the field of computer-based learning. Teachers can choose exercises that they want the children to focus on, and download them onto a USB memory stick, or email them directly to the children for use on their PC at home. As children progress, the results can be transferred back to the teacher or tutor, again via email, disk or USB. One parent described this aspect of the program as 'truly liberating'. The combination of identifying a child's needs, setting tasks that are fun and accurately focused on areas the child needs to improve, and enabling parents and children to work independently at home, can lead to significant improvements in reading and spelling. A fundamental change can often take place in children's attitude towards themselves as learners, as well as making them willing to put in the necessary time, effort and focus needed to develop basic understanding and skills.

Anecdotal evidence from discussions with parents reveals that computer-based learning at home plays a major part in revitalising their children's interest in reading and spelling. Children tend to give computers high status as objects, and working on a computer is often one of their most favoured activities within the home. A child is unlikely to protest when they are told that their homework involves working on a computer program for 30 minutes. Girls in particular seem to relish the opportunity to be involved with computer-based learning. Parents explain that this is often because the home PC can be dominated by male siblings. Parents also point to the interactive nature of Lexion, as it 'speaks' to the children, and they have instant feedback on how well they are doing, and can compete against themselves. One parent said, '*Reading, and particularly why my daughter has reading difficulties, has always seemed*

unduly complex. Lexion simplifies it out. We just get on with it.' Being independent is also important. '*We are no longer having to stress about whether the school will provide the necessary support, as we have the tools to get on and make progress. We feel our children now have a future.'*

Most schools in the UK have access to computer-based learning. However Lexion encourages families to be part of the solution: working in effective ways with the school, while also providing children and their parents with a degree of independence and autonomy. As one parent of an 11-year-old girl with a history of glue ear put it:

Now that Lexion has pinpointed the exact nature of Natasha's difficulties, she can get on and work on the computer at home, being involved in fun games. This has given her a huge boost to her confidence and understanding of reading and spellings, and her skills have improved enormously. She no longer says, "I'm stupid, I'm so stupid". She now feels confident enough to send her friends emails and wants to buy a mobile phone so she can send and receive text messages. This was something that she always wanted to do.'

Natasha herself wrote (to the author),

'Thank you for giving me Lexion. I did it most days and everyone tells me how much I have improved. I wrote a story at school yesterday and only had three spelling mistakes. I used to have lots and lots of spelling mistakes. I am much better with my English work now.'

Finally, this parent's view sums up what can be a difficult situation, but also illustrates how programs like Lexion can help:

'As a parent with a child who is facing difficulty at school you have a number of options open to you. Help within school can result in a lot of meetings that end in nothing more than your child being given some extra one-on-one reading time. This may be useful but will do very little to solve your child's problems. If you opt for the private route you may be faced with a daunting selection of cost implications with ongoing commitments, with varying results.'

'When we came across Lexion it seemed for the first time that within a short space of time my daughter's strengths and weaknesses had been assessed in a way that I could understand, and a clear path of action was recommended. As the

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learning is based round playing games on the computer, little resistance to taking part was encountered. We have not been using the system for that long but improvements are being noticed in both reading and writing and also keyboard skills. We still have a long way to go but as a parent I do feel at long last I am able to contribute something to my daughter's issues.'

Conclusion

If all children are to make the progress with reading and spelling that is essential for success in school, there needs to be efficient assessment of their knowledge and skills. Links between learning at school and at home are important, and children will grow in confidence if they feel their additional needs are being met. As schools invest in computer-based learning, they will be advised to look closely at whether effective links can be made between home and school. A program such as Lexion, which focuses on assessment, provides effective support and analysis, and can be used in school and at home, seems to provide many of the solutions.

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