

The Theory and Practice of Effective Teaching for Dyslexic Learners

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In the past year in the UK we have been told firstly that there is another new cure for dyslexia and secondly that it doesn't exist! For example in the Times Educational Supplement on September 2nd, the headline was 'Dyslexia storm brews', referring to a TV broadcast in October entitled 'The Dyslexia Myth'. Over its 33 years of existence the UK Dyslexia Institute has seen many of these storms come and go, but their recurrence causes confusion and creates anxiety for many families and for many teachers who are doing their best to help those who have specific literacy difficulties. It is therefore important to keep putting out the messages about what we do know about dyslexia and what can be done about it which is what I am to do in this article, even at the risk of repeating what many already know.

It is true that there are some myths around dyslexia. Dyslexia is not something that occurs only seen in people of average or above average intelligence. It is not something that can be 'cured' by special diet or physical exercise; but those with dyslexia can be supported in order to overcome its effects. It is not primarily a visual or a motor problem – although difficulties in these areas may sometimes be seen alongside the specific difficulties with language which are at the core of dyslexia. It is true that the approaches that work for those who are dyslexic, work for others too, but it is wrong to treat all those with reading difficulties the same. Thus dyslexia is not simple and one can have some sympathy for those who find it confusing. But that is not reason to abandon concept of dyslexia as meaningless, as has been argued in the media recently in the UK.

Effective teaching methods and our theoretical knowledge of dyslexia have developed hand in hand. Often the key for a dyslexic learner is meeting a teacher who seems to understand what it is like to be dyslexic and who can explain the theory behind the difficulties that they experience. This is one reason why it is so important for teachers to learn of the advances in psycholinguistics, neuropsychology and behaviour genetics at conferences such as the Nordic Congress. In recent years, there has been a strong convergence of evidence showing that specific difficulties in phonological processing are the primary causes of the literacy and related difficulties seen in dyslexia. It is clear that there is a genetic component (Olson, 2004) and that differences can be seen in areas of the brain specialised for language processing. There are different views about the origins of these phonological problems and the extent to which they might be causally related (or not) to difficulties with more basic functions in auditory, visual and motor processing as Frank Ramus discusses in his article in this journal. However, there is no doubting the central role of phonological processes as causal factors in dyslexia.

A key line of evidence that has helped establish the causal role of phonological skills in reading comes from intervention studies which evaluate the consequences of training on literacy outcomes. In my presentation to the Nordic conference, I reviewed findings from 4 important intervention studies from Cumbria, Colorado, Florida and York. Further details of these studies can be found in a recent review by myself (Rack, 2004). These studies, in turn, have built on the pioneering research done in Scandinavia by Ingvar Lundberg and colleagues, and in Oxford by Lynnette Bradley and Peter Bryant, which has led to the consensus view that phonological processing underpins literacy development. Research now is focused on comparisons of different types of training and on ways of adapting effective methods so that they can be delivered to the largest numbers who need support. This practical application of the research evidence was a second focus of my presentation.

Several consistent findings have emerged from the experimental and applied research on effective teaching. First and foremost, these studies show that children who have failed to make satisfactory progress with 'standard' methods, can make good progress with the kind of multi-sensory teaching methods that originated with Orton and have been developed and refined by organisations such as the Dyslexia Institute over the past 30 years. The effect size statistic is typically around .5 which means that for every unit of progress made by the control group, the intervention group make the same progress and half as much again.

Secondly, the findings are consistent in suggesting that developing phonological skills is necessary but not sufficient to bring about literacy gains. Data from Hatcher et al's study in Cumbria, for example, require us to reject a strong version of the phonological deficit theory which predicts that those whose phonological skills improve the most will improve the most in reading. In that study, the 'Phonology only' group improved most on the phonological tests but the 'Reading plus Phonology' group improved most in reading. Thus, it seems that there is a certain threshold of phonological awareness that needs to be, but direct teaching of strategies and provision of structured opportunities for practice is also needed. It is an open question as to whether other factors to do with underlying cognitive abilities, self-esteem, motivation or something else altogether is important to move beyond the level of word decoding. It seems reasonable to suppose that other factors will be relevant but further research is needed to establish what these are and how they may be promoted through teaching. Promising candidates include teaching of vocabulary and an emphasis on morphology.

Thirdly, the Colorado and Florida studies, discussed in my presentation, show that similar gains can be achieved with different kinds of programmes when these are delivered by skilled teachers. It should be stressed that the programmes being compared both involved systematic teaching of phonic rules with the differences primarily in the emphasis or balance of the components of the programme. Most researchers would find it difficult to include an intervention programme which they believed would be unlikely to yield *some* benefits.

The argument becomes complicated when we move on to ask whether one teaching approach is better than another or whether one approach is better for children with one particular set of characteristics. Here the scientific evidence is not as informative as the evidence of practical experience. One reason for this is that skilled teachers working with individuals or small groups will usually be creative and adaptable. They will use different materials to achieve the same objectives and adapt the same materials to meet the differing needs of individuals. It is therefore very difficult to find evidence, in a systematic study, that particular methods are less effective than others. However the Dyslexia Institute's SPELLIT study found just this kind of evidence. Here we compared a structured phonic teaching programme with a programme of activities to be done at home using materials and instructions provided for parents. The participants were age 7 ½ and at this age, after 2 ½ years of schooling in the UK, had been identified by their teachers as not progressing. We found that those children with more severe difficulties in reading and phonology made good progress with the structured teaching programme; doing much better than children with similar difficulties who had the home support programme. However, the opposite pattern was found for those children with less severe difficulties – children with better reading and better phonological skills did better with the home support programme.

In conclusion, I would suggest that there is a pleasing convergence between the research findings and the practical experiences of skilled, specialist teachers. At the core of the teaching methods that originated with Orton is the idea of making multisensory connections between print, sound, movement and meaning to support the learning of reading and spelling skills. The weight of evidence from the studies reviewed here, and from others, is that learning programmes need to include a range of activities, working at different levels of text, and that the benefits are greatest when the linkage is made explicit. The evidence of applied studies that have used different models of providing support is encouraging as it suggests that there are important roles for computer activities and for home support activities alongside individual and class-based methods.

Greg Brooks reviewed the evidence on 'What works for children with literacy difficulties' in 2003 and concluded, in support of the experience of organisations such as the Dyslexia Institute, that 'ordinary teaching' is not effective, but that good progress could be made with specific structured intervention. The work of Torgesen and colleagues at the Florida Reading Centre also supports this conclusion. Children receiving support in their regular classrooms could be 'stabilised', preventing them from falling further behind, but only with intensive structured teaching did they begin to catch up to their age peers. The main message to take from all this work is that dyslexic children slip further behind if their needs are not specifically addressed and that the later this is left, the worse the problems become and the harder they are to deal with. However, I also argued that expectations should be kept high, as there are effective methods for teaching dyslexic people to read. The research evidence is interesting in showing that differences between methods of teaching may matter less than some may think. Teaching decoding skills in the context of text reading, for example, is just as valid as teaching decoding skills in isolation and then applying those skills in context. My research from the SPELLIT study shows, however, that some

methods and approaches do seem to be better for some children and that matching the programme of support to the individual needs is critical. In summary, timing of support – earlier being best – intensity of support, use of a structured and systematic teaching and scaffolding of skills in context are features of effective practice. Less easy to assess in research studies, but of unquestionable importance are the skills and personal qualities of teachers. Practical experiences tells us that an understanding of the biological and cognitive theories dyslexia can be very helpful in understanding why certain difficulties occur and enabling the learner to find compensatory strategies. What also seems to matter is being, to quote Joe Torgesen, ‘relentless’. It was suggested to me that this word might not be so familiar to an audience of non-native speakers, so I elaborated on it’s meaning as ‘never give up’!

Advances in theory through studying the brain and the development of language skills hold the promise of earlier identification and intervention, but the success of so many dyslexic learners is now, and is likely to remain, in the hands of knowledgeable, skilful and relentless teachers. Never give up!

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