5 Phono-Graphix: Rethinking the Reading Curriculum

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Introduction

Alberto Manguel's (1996) description of learning to read is compelling: 'At one magical instant in your early childhood, the page of a book - that string of confused, alien ciphers - shivered into meaning. Words spoke to you, gave up their secrets; at that moment, whole universes opened. You became, irrevocably, a reader.' Unfortunately, not everyone experiences such a wonderful discovery. For many children, the complex task of learning how to read poses no problems. For others, progress may be slow and for a small number, learning to read seems to present significant difficulty. For this latter group, the string of confused alien ciphers can be very slow to shiver into meaning. For such children, there is nothing magical about learning to read; rather it may be viewed as a daunting and demoralising experience.

According to Brooks (2003), the case for the systematic teaching of phonics in the process of learning to read has been made strongly in recent years. Such an approach is viewed as helping children understand the code of black marks on a page, enabling them to assemble these into words and sentences that provide meaning. Mastery of this two stage process addresses both sides of the reading coin: decoding skills and comprehension. Essentially it creates the opportunity to help children learn to read and consequently read to learn.

Of the various approaches, Phono-Graphix claims to represent a 'shift' in phonics teaching, involving the implementation of a more logical, speedy and effective approach. As Figure 1 sets out, the programme is divided into three levels: 'basic code', 'advanced code' and 'multi-syllable management'. Within each level, specific concepts are introduced and the skills of segmenting, blending and phoneme manipulation are developed and reinforced.

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The central theme in this paper is to clarify what this 'shift' in teaching entails, especially in relation to children experiencing reading difficulties. On the surface, determining this can be difficult as Phono-Graphix uses the same letters and sounds as traditional phonics. However by delving into the intricacies of approach inherent in Phono-Graphix, a clearer understanding of the distinguishing features becomes apparent. Four key differences need examined:

- teaching letter names
- teaching a balanced approach to decoding words
- teaching letter-sound correspondences
- teaching a sight vocabulary.

TABLE 1: OVERVIEW OF THE PHONO-GRAPHIX PROGRAMME

Level	Main concepts taught	Skills
The basic code	The English written code is a sound based code – letters are pictures of sounds.	Blending
	Focus is on one-to-one correspondence.	Segmenting
	The word sequence follows – CVC (mop), VCC (end), CVCC (lost), CCVC (frog), CCVCC (trust).	Phoneme manipulation
The advanced code	Two or more letters can represent a sound such as <u>oa</u> (c<u>oa</u>t) or <u>igh</u> (h<u>igh</u>).	Blending
	Variation exists in the code, whereby most sounds can be represented in more than one way (<u>oe</u> in t<u>oe</u>, <u>oa</u> in b<u>oa</u>t, o in n<u>o</u> and <u>ow</u> in bl<u>ow</u>).	Segmenting
	There is overlap in the code, whereby some components can be represented by more than one sound such as <u>ow</u> in h<u>ow</u> and <u>ow</u> in sn<u>ow</u>.	Phoneme manipulation
Multisyllable management	Reading multisyllable words involves blending sounds into syllables and then the syllables into words.	Blending
	Spelling of multisyllable words works on the reverse of this. The syllables in the word are identified and then each syllable is segmented.	Segmenting
	Eight 'special endings' are taught such as frac**tion** (<u>tion</u> = shun), deli**cious**' (<u>cious</u> = shus).	Phoneme manipulation

Phono-Graphix - A 'Shift' in Approach

Teaching Letter Names

The first key difference between Phono-Graphix and other approaches involves the teaching of letter names. In line with the concept that the English written language is a sound based code and that letters are pictures of sounds, Phono-Graphix teaches the sounds only. McGuinness and McGuinness (1998) argue that having to learn two things for one symbol, the letter name and the sound, causes confusion and results in children experiencing difficulties differentiating between the two.

The idea of teaching letter sounds in the context of words is not the norm in many schools. The National Literacy Strategy (DfEE, 1998), which schools in Northern Ireland are invited to follow if they wish, recommends teaching letter names and letter sounds. While no explanation is offered as to the rationale behind this recommendation, a study by Hohn and Ehri (1983) provides some evidence as to why this approach may be favoured. Two groups of six pre-readers, all of whom could name letters but not produce the sounds, were taught segmentation skills using either letter tokens or blank tokens. The third group received no such teaching. The positive results obtained from the letter group, regarding segmentation skills and also ability at remembering sounds, led Hohn and Ehri (1983) to conclude that rather than confusing or hindering progress, letter-name knowledge facilitates remembering the sounds.

In the Hohn and Ehri (1983) study, the participating children could name letters prior to being taught letter sounds. Generally, as Adams (1990) comments, children who have few problems learning letter names have been introduced to them at home. Letter names are thus internalised long before sounds are introduced, which can help prevent confusion. Children with limited pre-school experience of letters are more likely to encounter problems distinguishing between letter names and sounds. To combat this, like McGuinness and McGuinness (1998), Solity (2003, p20) maintains that because 'teaching letter names is a redundant skill in both early reading and spelling', these should be introduced after children are fluent in applying the sounds.

In an Australian longitudinal study investigating the basic literacy skills of 615 pupils aged between 4 and 15 years, Harrison, Zollner and Magill (1996) highlighted confusion between the names and sounds of letters as one of four kinds of letter-sound error. This confusion, which was found to persist throughout primary school, was seen to have a significant

impact on children's ability to blend sounds to produce words. After four years of schooling, approximately 50% had problems blending three letters into a syllable.

Investigating the effects of using different literacy instruction, Ball and Blachman (1991) also found that despite each group having equal letter-name knowledge, this did not impact on reading skill. For seven weeks, 90 five-year-old children, divided into three groups, received 20 minute literacy sessions, four times each week. A common feature between the phoneme awareness group and the language activities group was the learning of nine letters and phonemes. The control group participated in normal classroom activities. On a reading test consisting of two and three-sound regularly spelt words using the nine letters, the phoneme awareness group outperformed the other two groups.

In contrast to these findings, O'Connor, Jenkins, Cole and Mills (1993), comparing the effects of teaching one group of children letter names and sounds and another group letter sounds, reported no significant difference in achievement at the end of the year of support and one year after support ended. The only difference was that the letter sounds group performed better in spelling. It is possible to argue that this in itself points to the benefits of focusing on letter sounds.

From the research evidence, it is understandable why McGuinness and McGuinness (1998) view the most important part in learning to read as sound and not letter-name knowledge. Such an assertion is based on the belief that focusing on the sounds and teaching these in the context of words rather than in isolation, helps children associate the symbols with the sounds more quickly, because they are actively using them to make words. This enables children to see the purpose of knowing and using the sounds of their language. From our experience of teaching children with reading difficulties, adopting this approach has been advantageous in reducing confusion and facilitating faster progress in reading and writing.

A Balanced Approach

The second key difference is concerned with the idea of using a balanced approach to assist with the decoding of words. In our experience, the teaching of reading in many schools favours this interactive model, whereby a combination of whole-language and phonic approaches are used. The National Literacy Strategy (DfEE, 1998, p4), as well as proposals for the revised Northern Ireland Curriculum (CCEA, 2002), underlines the importance of teaching children to 'use the full range of

search lights to tackle texts from individual words upwards and from the text downwards.'

Phono-Graphix does not acknowledge this idea of 'balance'. Children are taught simply to use their knowledge of the code to identify unfamiliar words. The efficacy of encouraging children to use pictures, context or the initial letters of words as decoding strategies is questionable. For those children who have reading difficulties, employing such strategies may simply herald an open ticket to use any word that comes to mind. Based on personal experience, few children with reading difficulties substitute words correctly or meaningfully. Harrison et al (1996) reported that as a result of relying on initial letters or initial and final letters to identify words, approximately 80% of eight-year-old children within their study demonstrated inaccurate word guessing, when asked to read phonetically regular words containing one to four syllables in length. Similar errors were being made four years later by 60% of the children, demonstrating how such flawed strategies can become established and difficult to eradicate.

It is important that children are not encouraged to think that substituting words or guessing is acceptable. Encouraging this strategy, even alongside others, may result in children simply failing to decode words systematically and hence failing to comprehend written text. The emphasis in Phono-Graphix is that successful reading involves actively decoding words and not guessing them. Encouraging children, especially those struggling with learning to read, to adhere to this singular strategy may also reduce confusion regarding whether to employ picture cues, context cues or sounds when identifying unfamiliar words. This can be empowering for children as they know exactly what is required from them.

Teaching Letter-sound Correspondences

The third key difference between Phono-Graphix and other approaches involves the teaching of letter-sound correspondences. This issue has been characterised by the polarisation of two approaches: synthetic and analytic. It is now possible to argue that the introduction of Phono-Graphix creates a third dimension to this conflict.

The synthetic approach is an accelerated form of phonics, which teaches children at the very beginning of reading instruction to pronounce sounds in isolation and then blend these to produce the word. In contrast, analytic phonics starts with the whole word and highlights spelling

patterns, which are then split into smaller parts, such as onset and rime. These rimes help children learn to read and spell by the process of analogy.

Phono-Graphix is often perceived as being similar to synthetic phonics, from its promotion of decoding words sound by sound and its recommendation to teach quickly. McGuinness (2004) stresses that Phono-Graphix is 'definitely not a phonics programme of any sort', because it does not teach phonic rules or letter names and avoids teaching that letters 'make' sounds, emphasising instead that they represent sounds. The twist in Phono-Graphix, as McGuinness (2004) suggests, is that rather than teaching the sounds, it teaches children 'how to discover the ways to show the sounds.'

A number of recent studies have investigated using synthetic and analytic phonics. Watson and Johnston (1998), in a longitudinal study, compared the performance of approximately 300 Scottish Primary 1 children, divided into three groups and exposed to either a synthetic, analytic or similar programme to analytic phonics. After receiving 16 weeks of instruction for 20 minutes a day, the children in the synthetic phonics group were reading and spelling seven months above chronological age, and were a similar amount ahead of the children taught by the two analytic programmes. Johnston and Watson's (2005) final report of this study reveals the continuing benefits of synthetic phonics. These findings have been highly publicized and may have far-reaching effects on the debate about reading in the United Kingdom.

Santa and Hoien (1999) reported similar benefits from incorporating the onset and rime component in an early intervention programme for children with reading problems. When tested at the end of Grade 1 and the beginning of Grade 2, the reading, spelling and sight word recognition of those children who received instruction in this approach surpassed those in the control group. Santa and Hoien (1999) maintained that this resulted from the children being able to transfer their knowledge of spelling patterns to aid recognition of unfamiliar words with the same ending such as *sand, land.*

McGuinness and McGuinness (1998) argue that the onset and rime approach teaches children not to decode the whole word. If the next word is to be similar to the last two sounds in the previous word such as 'pin', 'win', then children tend to focus on the initial sound of the next word. This encourages children to think that it is only initial sounds that are important and results in guessing the remainder of the word.

Within Phono-Graphix, rime patterns are also viewed as confusing and demanding, due to children having to learn the letter-sound

correspondences, consonant clusters (br, fl) and blend combinations (ip, ent), approximately one thousand in total. We concur with Deavers, Solity and Kerfoot (2000) that this places huge demands on children's memories and inevitably many may be forgotten. In contrast to the onset and rime approach, after teaching CVC words, Phono-Graphix teaches VCC/CVCC words followed by CCVC words and teaches these as adjacent consonants. This shows children what they can do with a little knowledge. For example, if children can produce the sounds for 's' and 'l', they do not need to relearn these as *'sl'*. Carnine, Silbert and Kameenui (1997) question the onset and rime sequence and recommend a similar order to that proposed in Phono-Graphix. Solity (2003) also comments that this sequence increases generalisation and reduces memory load.

Clearly, opinion is divided regarding the benefits of analytic and synthetic approaches. Adams (1990) and Brooks (2003) interpret the experimental evidence as favouring synthetic phonics, because children taught using this approach made faster progress. Evidence of the effectiveness of Phono-Graphix is more difficult to find, given the limited research available. A study carried out in Bristol involving reception classes provides positive findings. One group of children received Phono-Graphix instruction, another group received Phono-Graphix supplemented with onset and rime and teachers delivering the National Literacy Strategy taught the third group. Dias and Juniper (2002) concluded that while all the children had made similar progress in phoneme awareness, the children taught purely Phono-Graphix had better blending and segmenting skills and their ability to generalise these skills was superior when presented with unfamiliar words. More research is needed to further clarify the effectiveness of Phono-Graphix, both as a general teaching programme and as an approach for helping children experiencing reading difficulties.

Reading Books and Developing a Sight Vocabulary

The fourth key difference between Phono-Graphix and other reading approaches relates to the provision of reading books and encouraging children to memorise high frequency words. The claim made by McGuinness (1998) that children should not be presented with books until they are competent with a number of CVC words has major implications for schools. Although encouraging the reading of stories to children, McGuinness (1998) maintains that children should not be given reading books containing words they cannot decode.

Johnston and Watson (1997) lend support to this claim in a study based on an intensive eight-week synthetic phonics programme, involving daily one-hour teaching prior to introducing reading books. They demonstrated that test results from March of the first year revealed word reading to be 16 months ahead of chronological age. In their subsequent study, Watson and Johnston (1998) introduced reading books at the normal time and adopted a slower pace of instruction. Following 20 minutes of daily instruction in synthetic phonics for 16 weeks, results revealed a seven-month advance on chronological age. Although the initial study produced better results, satisfactory gains can be made by incorporating reading books into a less intensive synthetic programme.

For many children, especially those with reading difficulties, developing competency of CVC words may take some considerable time. In addition, many words in early reading books are difficult and children at the beginning stage of reading do not possess the necessary knowledge to decode these. Within Phono-Graphix, the idea of teaching such words as part of a sight vocabulary is rejected. McGuinness and McGuinness (1998, p. 21) adopt the stance that 'the English written code is a sound symbol code, not a word symbol code. That's the game. If you're going to play it, you might as well play it right.'

The findings from a study by Seymour, Aro and Erskine (2003) may make adopting this rather rigid stance problematic. Investigating how children learn to read and write in 12 different languages, Seymour et al (2003) found that because of the complex syllable structure and deep orthography characteristic of the English language, English-speaking children take two to two and a half times as long to reach the same level of competence compared to children learning literacy in less complex languages with shallower orthographies such as Finland. This delay was attributed to the dual-process of whole-word and phonics elements, necessary for language with deep orthographies, taking longer than the single-process (phonic) foundation necessary for languages with shallow orthographies.

As a result of the complex structure of the English language, Brooks (2003) supports the teaching of a small initial sight vocabulary, stressing that phonically regular words should be taught phonically with only the most complex being learned as whole-words. According to Brooks (2003), children should be told explicitly that only a few words have to be learned this way. It is possible to argue that some children, even if encouraged to memorise a small number of sight words, may believe that reading involves learning whole-words. In our opinion, as children are encountering many of

these sight words in text, teaching these in the context of the story by offering explanations regarding the components of the word, offers a more meaningful approach than simply learning words in isolation.

Conclusion

It is apparent that Phono-Graphix does represent quite a significant shift in teaching, a shift that involves teaching only letter sounds, emphasising a singular approach to decoding words, the avoidance of using reading books too early and the rejection of teaching a sight vocabulary. This shift was designed to create a logical, speedy and effective reading method. In theory, Phono-Graphix appears to contain the ingredients for such a method. The reasoning behind each particular change in approach seems plausible, especially in relation to children experiencing reading difficulties. Such children could identify with Pip's declaration in *Great Expectations* that he 'struggled through the alphabet as if it had been a bramble bush; getting considerably worried and scratched by every letter' (Dickens, 1861, p. 36). Within Phono-Graphix, the focus on teaching sounds in the meaningful context of words may help alleviate such anxieties and struggles, especially those encountered when having to learn letter names and sounds. In practice, whether Phono-Graphix represents a logical, speedy and effective method, helping children learn to read and subsequently read to learn requires more research, especially within Ireland and the United Kingdom.

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