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Synthetic Phonics: A Historical Perspective

Interview with Professor Rhona S Johnston MBE by Dr Gillian Evans, September 2023

Through an insightful and probing conversation, Emeritus Professor Rhona S. Johnston MBE offers a priceless glimpse into her extensive research on synthetic phonics and the challenges of ensuring its implementation in classrooms. Professor Johnston's research journey began over four decades ago in Scotland but eventually had a transformative impact on early reading instruction in England. This retrospective view, chronicled by Dr Gillian Evans, highlights the hurdles and obstacles faced in the pursuit of making scientifically rigorous educational research truly beneficial to children most vulnerable to literacy difficulties.

1. What is your academic and teaching background?

I am an academic Psychologist and started researching reading disorders over 40 years ago. After my PhD, but before becoming a lecturer at the University of St Andrews, I was a teacher and my research has been influenced by my own personal experience of teaching remedial pupils in Kirkcaldy and Glenrothes, using analytic phonics and whole language instruction.

2. Does your research belong to the field Science of Reading?

Yes, my research falls into this field. Before I retired, I was a member of the U.S. Society for the Scientific Study of Reading

3. How did your research into Reading disorders start?

I started my research on reading disorders in 1979. As the field progressed, a consensus emerged that children with specific reading disorders (i.e., dyslexics) had a fundamental problem in developing awareness of phonemes in spoken words, leading to difficulty in reading nonwords, e.g. 'daspog'. Nonword reading was tested as a measure of what children do to read unfamiliar words. Early on I often failed to find these weaknesses in my Scottish samples when the sample was selected from classes rather than specialised reading units. I felt that the answer to this might lie in the phonics that was typically taught in Scotland but not in England, that it might be protective against phonological reading disorders. I therefore started a research programme with Dr Brian Thompson in New Zealand, where phonics had not been taught for many decades. We matched primary school pupils in Scotland and New Zealand on their ability to read real words, and compared the two groups on nonword reading ability. The Scottish sample had significantly better phonological, i.e., nonword, reading ability (Johnston & Thompson, 1989). In this respect the New Zealand children looked like phonological dyslexics, but they were in fact making normal progress in reading. However, they spent much more time receiving reading tuition in the classroom (Connelly et al 2001).

At the time, there was a growing view that dyslexia was a phonological disorder prevalent in children of average and above average ability (i.e., a discrepancy model) and most studies only included children in this ability range. I felt that the problems of lower ability children also needed to be examined, based on my experiences as a remedial teacher in Kirkcaldy and Glenrothes. After many years of studying underachievement in reading across the whole ability range, funded by the Medical Research Council and the Wellcome Trust, I had enough data to show that difficulties in reading phonologically, if they occurred, were actually largely confined to the higher ability children, who had better visual ability (a skill which correlates well with IQ). I wondered whether some more able poor readers simply get the wrong hypothesis about reading and tackle word reading as a visual task, which fitted their strengths, instead of using the letter-sound information we have in the English

spelling system (Johnston et al 1994; Johnston and Morrison, 2007). An explanation was needed as the poor readers in my samples, at all ability levels, had all been taught phonics and yet the only higher ability ones had set off down a pathway of phonological reading difficulties. However, I knew there were some children who have very fundamental phonological awareness difficulties, one of whom I studied in detail (Johnston, 1983). I wondered whether some, maybe most, of the higher IQ children with reading problems might have what could be called 'instructional dyslexia', that maybe the traditional approach taken to teaching phonics was not over-riding their tendency to try to read words visually without paying much attention to letter sound information.

Around this time, Joyce Watson, a lecturer at Dundee College of Education (where I had qualified as a teacher) approached me about studying for a PhD. She undertook a study of how phonics was being taught in primary schools in two Scottish regions. We were shocked to find how slowly phonics was taught in most classes; children in Primary 1 were taught a very gradual form of analytic phonics as a separate strand of word study that could not be integrated with reading books until the end of Primary 1.

Furthermore, there was also the growing idea around that phonics did not need be taught at all and that children could learn to read by being shown words individually on cards and being told the pronunciation of the whole word (the look-say method), or by guessing what the word might be from context (the 'psycholinguistic' method). These latter approaches were rapidly taken up in England and phonics teaching largely disappeared; Scottish teachers generally continued with teaching an analytic form of phonics. However, by the time we started the research the method had become much more slowly implemented and the phonics was taught in a primarily whole word context. Children were typically only taught letter sounds at the beginning of words for the first two terms of Primary 1. Words were prepared for them to take home in tins, to be practised as whole words, and they read their reading scheme books by sight. After Easter, children were typically taught about letter sounds at the end of words, and then in the middle. Some teachers then also taught their pupils to sound and blend the words to pronounce them, but we found this to be very much on the wane in the 1990s.

In her studies of how phonics was taught in Scotland, Joyce Watson had the good fortune to have included a class where the teacher taught active sounding and blending before Easter; that is, the children were taught to sound /c//a//t/ then blend the sounds to form 'cat'. This class had word reading ability 1.83 months ahead of chronological age at this point, whereas the other 11 classes were on average -5.7 months behind. Even where overt sounding and blending was not taught after Easter, the reading performance of the other children in the other 11 classes picked up markedly when the children were shown the role of letter sounds all through words. However, they did not come up to the level of the other class.

4. How was your systematic teaching method for synthetic phonics developed?

While Joyce Watson was obtaining evidence on the benefits of actively teaching sounding and blending, I met Professor Linnea Ehri at a Society for the Scientific Study of Reading conference in Chicago. Professor Ehri told me that Dinah Feitelson had written a book which explained in detail how synthetic phonics, i.e., sounding and blending all through words at the start of reading tuition, was taught in Austria. We did an experimental study to see how well this approach would work in English, where the spelling system is not as regular as in German. We thought that this was a method that would work well in English based on Joyce Watson's findings and we subsequently became aware of Sue Lloyd's work in her school and her programme (which is called Jolly Phonics).

Our first study was a randomised controlled trial one which we carried out in Fife (Watson, 1998 and Johnston & Watson, 2004, Experiment 2). Following the Fife Guidelines, the children in term 1 of Primary 1 were being taught by the gradual analytic phonics method in their classrooms, learning one letter sound a week at the beginning of words, seeing a family of words all starting with that sound. The children in our experimental study were pre-tested one week after starting school for literacy and phonological skills. They then had additional teaching from Joyce Watson in small groups, twice a week for 15 minutes, for 19 sessions in term 1 of Primary 1, finishing at Christmas. The children were randomly assigned for teaching into one of three groups, and all groups were taught using the same set of printed words. One group learnt the new printed words on a look-say basis, and another group learnt 2 letter sounds a week in the initial position of words, i.e., an accelerated analytic phonics approach. The third group was also taught two letter sounds a week, but they learnt them in all positions of words, sounding and blending the letter sounds to find out what the words were; this was a synthetic phonics approach. Magnetic boards and letters were used so that the children had practice in blending the letter sounds as they were pushed together and also so they could hear words and spell them using the letters. The results were very striking, the synthetic phonics group was reading a significant 0.4 years ahead of the other two groups at the end of the study, after only 4.75 hours of tuition. At the start of the second year of school, without any further tuition from Joyce Watson, they were 0.7 and 0.9 years ahead in reading compared with the other two groups; we deduced from this further gain that the method had enabled the children to self-teach. These children also had significantly better phoneme awareness skills, which interested us very much given our concerns about children with reading disorders.

5. What is the relationship between phonemic awareness and reading?

The development of phoneme awareness skills is associated with learning to read in an alphabetic language. Many teaching schemes seek to develop phonemic awareness before reading and other reading-related skills. However, our research found that, at least initially, it is reading and reading-related skills which develop phonemic awareness rather than the other way round (Johnston et al, 1996; Johnston & Watson, 1997).

6. What was the Clackmannanshire Study?

After the findings from our study in Fife were publicised, we were approached by Steve Trickey, an educational psychologist from Clackmannanshire Council, to carry out a study in his region. The study was to be funded by the Scottish Office Education and Industry Department's (SOEID) Early Reading Initiative. The SOEID Early Reading Initiative had £60 million of funding from the Scottish Executive. A few Councils received funding to conduct research projects, these included Clackmannanshire, North Lanarkshire, Renfrewshire and West Dunbartonshire. The funding provided by Clackmannanshire allowed us to see how well our experimental synthetic phonics method worked when taught by class teachers, without any extra assistants in the classroom.

Joyce Watson provided daily teaching programmes for the three groups. On the basis of her meticulous work observing phonics teaching in two regions, Joyce was able to devise a 16-week analytic phonics programme where a set of printed words was used to teach the children new letter sounds in the initial position of words at the pace of one a week, for 20 minutes a day. A second group was taught analytic phonics at the same pace using this word set but within the 20 minutes they also carried out a rigorous phonological and phoneme awareness training programme. The third group, the synthetic phonics group, was taught to sound and blend letters all through words for reading, to segment spoken words for spelling, and to form the letters, as soon as a few letter sounds had been taught, using the same set of printed words as the other two groups. The rest of the

Language Arts programme remained unchanged and reading books were introduced as usual 6 weeks after the start of term.

The aim of this study was to pit the efficacy of synthetic phonics teaching against analytic phonics teaching plus phonological awareness training. However, as we had shown that speeding up letter sound teaching within an analytic phonics programme did not lead to better word reading, it is also possible to examine whether synthetic phonics teaching produced better reading than analytic phonics teaching. Synthetic phonics teaching produced far better reading, spelling and phoneme awareness skills than we found for the two analytic phonics groups, very much to the benefit of children starting school with weak phonological skills.

The experimental synthetic phonics teaching programme also included: the early introduction of the reading of captions, phrases and sentences; an early introduction to the non decodable graded readers, with the irregularly spelt words being taught phonically before the book was read; worksheets for the children to practise their new skills with integral assessment at each stage.

7. What were the results from the Clackmannanshire Study?

The results were first reported in Interchange No. 57 published by The Scottish Office Education and Industry Department (Watson & Johnston, 1998). The study was published in greater detail, as Experiment 1 in Johnston & Watson (2004).

The table below shows the gains for all 3 research groups after 7 months in school, for reading, spelling and phonemic awareness:

| Phonics Method | Reading | Spelling | Phonemic Awareness |
|-------------------------------|----------------|-----------------|---------------------------|
| Analytic | + 5 months | + 3 months | + 13% |
| Analytic + Phonemic Awareness | + 5 months | + 4 months | + 32% |
| Synthetic | +13 months | +12 months | + 61% |

We concluded the synthetic phonics programme led to:

- children learning to read effectively at the grapheme to phoneme conversion level (i.e., letters to sounds)
- reading and spelling performance being greater than that achieved by analytic phonics teaching
- much better phonemic awareness ability than in the other groups
- fewer underachieving children in a class, leaving teachers more time to assist children who were still making a slow start in reading

For ethical reasons, the non-synthetic phonics taught groups received the synthetic phonics programme after Easter of Primary 1, and thereafter we compared reading and spelling ability against what was expected for age, using standardised tests. The pupils were followed every year until the end of primary schooling (Johnston & Watson, 2003a; 2003b; 2005a and 2005b). It has been found in many studies that boys fall behind girls in reading and spelling soon after starting school. However, we found that the boys kept up with or were even ahead of the girls; for example, in Primary 5, when the children were 9.7 years old, the girls had a mean word reading age of 11.6 years, and the boys of 12.2 years. Spelling and reading comprehension scores were also significantly above chronological age but did not differ significantly between boys and girls.

At the end of Primary 7, word reading was 3 years 6 months ahead of chronological age, spelling was 1 year 9 months ahead, and reading comprehension was 3.5 months ahead (Johnston & Watson, 2005a and 2005b). The level of underachievement was very low, the boys still performed at least as well as the girls, and the children from economically disadvantaged homes performed as well as the other children for most of the 7 years of the study. A further journal article provided a more detailed comparison between the 10-year-old boys and girls in the study (Johnston et al, 2012), and also included a comparison with children taught via a fundamentally analytic phonics programme. As well as the synthetic phonics taught sample being ahead in reading and spelling, they were also ahead in the reading of irregularly spelt words, showing that the synthetic phonics approach caused no detriment in reading words containing only partial phonic information. Difficulties in reading irregular words are often erroneously predicted to arise from early and rigorous synthetic phonics teaching and this belief is used to support the direct teaching of whole word recognition alongside synthetic phonics.

8. Why were the results of your 'Clackmannanshire' study so important?

Our results showed that a thorough implementation of synthetic phonics at the start of schooling greatly reduces the number of children underachieving in reading. Our programme greatly helped children who were at risk of reading failure because of weak phonological and phoneme awareness skills. We came to this conclusion by identifying 'at risk' children using the phonological awareness skills criteria published in another study (Torgesen et al 1999) and analysing their performance. We had many 'at risk' children in the study, which reflected the poor socio-economic background of nearly half of the sample. The 'at risk' children's reading performance was a little lower when compared with the other children, but by carrying out the synthetic phonics programme they performed very well for their chronological age (see below for details).

We were told in Clackmannanshire that the children in our study needed less specialist attention later on, which enabled the earlier detection of children with persistent reading problems.

Although underachievement was very low, we did have a few children who, although reading, were performing well below age expectations. We documented the progress of one such pupil in the 7-year longitudinal study report (Johnston & Watson, 2005b). Pupil AF had poor receptive and expressive language and pronounced phonological difficulties, but, with the support of an excellent remedial teacher, he continued with the synthetic phonics approach throughout primary schooling and ended up reading appropriately for his age.

9. Where could teachers find information on your research?

We prepared many reports for teachers that were published by the SOIED in the Interchange (Watson & Johnston, 1998) and Insight (Johnston & Watson, 2003a; 2003b; 2005a and 2005b) series.

The SOIED also funded the publication of a Staff Training Package (Watson & Johnston, 2000). The package included a booklet and accompanying CD which provided details of: lesson plans; how to teach synthetic phonics to show children the reversible process of reading and spelling, spending equal time on each; video clips of teachers modelling the synthetic phonics teaching methodology with children; examples of worksheets and approaches for reading for meaning etc.

The synthetic phonics programme was designed not only to replace the phonics element of the Language Arts programme done in the region but to show the children as soon as possible its

application to reading text. In none of our studies were pupils taught solely by synthetic phonics, it was taught within a broad and rich Language Arts programme.

We also wrote a book for primary school teachers, called *Teaching Synthetic Phonics* (Johnston and Watson, 2007). A second edition of the book, with some major additions, was published (Johnston and Watson, 2014).

10. Is your Synthetic Phonics teaching method available to schools and parents?

The synthetic phonics teaching method was turned into a teaching programme called Bug Club Phonics, which is available from Pearson, a supplier of educational resources to schools. The Bug Club Phonics programme contains daily lesson plans and has electronic whiteboard activities. There are also over 100 decodable (fiction and non-fiction) readers that have been written to help children practise their new decoding skills.

Pearson has also published our programme for parents called 'My Fast Phonics Folder', to help with practising synthetic phonics at home.

11. How did your research compare to other literacy studies in Scotland?

Other interesting studies that included phonics teaching have been carried out in Scotland, but their focus has not been on underachievers. Because of our interest in phonological reading disorders, we tested phonological and phonemic awareness at the start of schooling, we matched our groups on verbal ability, and we tested our full sample, not a random selection of pupils. The latter enabled us to have an accurate measure of the progress of all the children, including those 'at risk' of reading failure. In the literature, being at risk of reading failure is defined as a lack of phonological and phoneme awareness skill prior to reading tuition; there were a considerable number of such children in our study. Our aim was to bring the level of the children at risk of reading failure up to the level of the other children.

Ferguson et al (2011) used the 'Think About It' scheme and compared the performance of the intervention group with normal practice (i.e., unseen controls); this programme had a phonics element plus tuition in other aspects of reading. This balance was also of course the case for our Clackmannanshire sample, both within the daily 20 minutes programme and in the rest of the Language Arts teaching programme used in the region at that time. The teachers in this study, unlike ours, had a considerable amount of extra teaching support via an early years worker in each class and also had parental support.

Ferguson et al (2011) did not specifically report their sample's phonemic awareness skills, although they tested them. They therefore could not do a sub group analysis of children lacking phoneme awareness skills at the start of schooling, i.e., the 'at risk' children, meaning that they could not chart their progress with the teaching programme. It is not likely, however, that Ferguson et al's 'at risk' children had achieved the 0.7 years ahead of age expectations in word reading ours did in Primary 2 as their whole sample was 0.74 years ahead. By comparison the whole sample in our study was 0.9 years ahead (achieved with no extra help for the teachers in the classroom). Ferguson et al also reported standard deviations 26% larger than ours, which indicates that there was a wider variation between the upper and lower performers in their study, varying from a lower base.

Dr MacKay's West Dunbartonshire PhD study (MacKay, 2005) compared Jolly Phonics, a synthetic phonics programme, against current teaching practice (which was said to be analytic phonics, but which was not monitored, i.e., these were unseen controls). The Phonics Handbook (Lloyd, 1992) did not contain actual lessons so a Teacher's Book was developed in the region for the study. Dr MacKay

concluded that synthetic phonics teaching significantly increased reading ability compared to the approach used in the control schools.

12. Why do you think that the Scottish Government failed to promote your synthetic phonics teaching method in Scotland?

The first results of the Clackmannanshire study have been available since 1998 and our Staff Training Package, with accompanying DVD, was published in 2000 (Watson & Johnston, 2000).

Our 7-year results of the Clackmannanshire study were published in 2005 (Johnston & Watson, 2005a and 2005b) but our research came under attack by Sue Ellis, a senior lecturer at Strathclyde University. Sue Ellis advocated for the whole language teaching of literacy and refused to accept that the increases we measured in children's reading, spelling and comprehension were due to the synthetic phonics teaching method we had designed and implemented. Sue Ellis published an article in the Scottish edition of the Times Educational Supplement (Ellis, 2005) implying that there were other factors, such as extra teaching support, that led to the gains and that they were not due to our synthetic phonics method of teaching; she also sent a letter to the Guardian newspaper making the same claim. I have seen no such criticisms from her of the West Dunbartonshire (MacKay, 2005) and the Ferguson et al (2011) studies, which did indeed include considerable additional teaching support. Over the years she has continued to argue that politicians should not introduce changes to classroom teaching based on our studies (Ellis, 2007 and 2014), and this has been effective.

I understand there is a petition currently lodged with the Scottish Parliament requesting that synthetic phonics teaching be included in initial teacher education courses and professional learning. On the basis of our research in Scotland, I think early synthetic phonics teaching is very likely to improve greatly the reading and spelling skills of slower learners, as well as being beneficial for faster learning pupils as well. Each Council in Scotland decides on what literacy programme they use, and I understand that only a few are using synthetic phonics programmes.

13. Why did England embrace your synthetic phonics teaching methodology?

In the late 1990's there was concern in England about low levels of literacy and so the National Literacy Strategy (NLS) was launched in 1998. The NLS concluded that more phonics needed to be taught in classrooms. A Literacy Hour was established in which teachers were encouraged to teach phonics in addition to a whole language approach.

The NLS published the 'Progression in Phonics' programme in 1999 as the recommended approach. This approach explained to teachers how to introduce a phonics element that was very similar to analytic phonics. It also had a strong element of segmenting for spelling with a lesser role for the sounding and blending of words for reading. I found that in England teachers thought phonics was for spelling, not reading. By 2003, it was clear that the NLS initiatives were not raising standards as had been hoped. The NLS issued a new phonics initiative called 'Playing with Sounds', which speeded up the phonics for spelling and the (minor) phonics for reading element. The multi-cueing searchlight model was introduced in 2004, where it was proposed that children should use multiple cues for learning to recognise words, not just a phonics approach. In 2005 our 7-year longitudinal study in Clackmannanshire was published. In the same year, a cross-party Parliamentary Education and Skills Select Committee started a series of hearings on the teaching of reading. Our studies impressed the committee, and in April 2005 they recommended that the Government should undertake an immediate review of the National Literacy Strategy. This review was conducted by Sir Jim Rose, formerly Her Majesty's Chief Inspector (HMI) of Primary Education, and Director of Inspection for the Office for Standards in Education (OFSTED) in England.

In his 2006 report, *The Teaching of Early Reading* (Rose, 2006), five pages (pp 61-65) covered the research and teaching practice in Clackmannanshire. A team went to Clackmannanshire schools to look specifically at our synthetic phonics teaching method in the classrooms. The report gives a good account of the teaching practices used in Clackmannanshire.

The review team visited schools in England where other synthetic phonics programmes were being used. Programmes had been developed by Sue Lloyd (Jolly Phonics), Marlynne Grant (Sounds Discovery) and Ruth Miskin (ReadWrite Inc). A full list of the schools visited, and the oral evidence heard by the review team, is given in the review (Rose, 2006).

This review exposed the weaknesses in the NLS searchlights model and concluded 'Having considered a wide range of evidence the review has concluded that the case for systematic phonic work is overwhelming and much strengthened by a synthetic approach.' (p 20, Rose, 2006).

14. What is the Letters and Sounds Framework, published in England (2007)?

In 2006 the Department for Education and Skills decided that to raise reading standards a new programme was needed to fully encapsulate the systematic teaching of synthetic phonics, without any sight word teaching.

Joyce Watson and I were consulted on the development of *Letters and Sounds: Principle and Practice of High-Quality Phonics* (DfES, 2007); it is a framework because classroom teaching materials are not included. The Framework included the scope and sequence for teaching children 43 phoneme/grapheme correspondences in the first 16 weeks of reading instruction, included were ff, ll, ss and zz as well as the single letters. Newfound blending skills are practised using decodable text.

The framework could be used by schools and developers/publishers to produce synthetic phonics teaching resources. Subsequently a more fully implemented version of this framework has been published commercially, i.e. Little Wandle Letters and Sounds.

15. What is Systematic Synthetic Phonics?

We introduced the term synthetic phonics into common usage in education, but it was Sir Jim Rose who expanded the term to Systematic Synthetic Phonics (SSP). Sir Jim Rose knew it was crucial for teachers to apply systematically the principles of synthetic phonic work for children to benefit fully when being taught to read and spell. The new name meant that it could be differentiated from the previous Progression in Phonics and Playing with Sounds programmes. It was made clear that if a literacy programme did not contain all of the elements published within Letters and Sounds then it could not be described as the kind of synthetic phonics he was advocating. Thus, sounding and blending for reading and segmenting for spelling could not, as was happening, simply be added to existing programmes using a sight word teaching approach and be called a SSP programme.

16. What are the Core Criteria for Systematic Synthetic Phonics programmes?

In 2010, the Department for Education in England published a guidance document to enable programme producers to self-assess the content of their synthetic phonics programmes. The guidance document was called 'Phonics teaching materials: core criteria and the self-assessment process' (DfE, 2010, revised 2023). Programme developers completed the assessment process, and the programmes were vetted by the Department for Education (DfE, 2013) before being listed on the government website. Our programme, at that time called Phonics Bug, was listed with 9 other SSP programmes; some programmes had to be rejected as they were simply adding on a sounding and

blending element that was not integral to the programmes. The self-assessment documents also provide a structure for headteachers and teachers to be able to evaluate different SSP programmes.

In 2021, the DfE revised the core criteria for effective SSP programmes and the validation process. There is now a plethora of validated programmes, and the Reading Framework (DfE 2023) has recently been updated.

17. Why did England introduce the Phonic Screening Check (PSC)?

In 2010 the new coalition government promised that the standards in education for England would be improved further. Nick Gibb became Schools Minister, and he initiated another attempt to strengthen synthetic phonics teaching by making matched-funding available to schools so that they could purchase approved synthetic phonics programmes and be trained to use them. In that same year, a decision was taken to introduce the Phonics Screening Check (PSC) to consolidate the teaching of the synthetic phonics approach in Reception and Year 1. The national roll-out of the PSC was in June 2012. Every Year 1 child was assessed on their ability to decode real words and non-words. This focussed the teaching profession on how well they were delivering systematic synthetic phonics instruction. Over the years, pre lockdowns, there have been steady improvements in the percentage of children attaining the expected level in the PSC and in Key Stage 2 reading comprehension at age 11, see below.

| Stage | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|------|------|------|------|------|------|------|------|
| PSC at age 6 | 58% | 69% | 74% | 77% | 81% | 81% | 82% | 82% |
| Reading at age 11 from 2016 (new scoring system adopted by DfE in 2016 (DfE, 2016)) | | | | | 66% | 72% | 75% | 73% |

These figures are the average across England. It has been recognised that there is a wide variation between schools and in 2018 Nick Gibb provided funding for the English Hub Initiative. The initiative has schools with excellent phonics provision share their expertise with schools that need extra help with this. The school’s inspectorate in England, Ofsted, is now specifically reviewing the provision of Systematic Synthetic Phonics in their school inspection reports.

I have been closely involved in the introduction of good quality synthetic phonics teaching in England and have sat on six Department for Education committees. I was awarded an MBE for services to education in 2012.

18. What have been the lessons learned with implementing Systematic Synthetic Phonics in England?

The road to ensuring that children in the classroom received evidence-based teaching methods is difficult and we were asked to write a book chapter about our experiences by Research Professor Kevin Durkin of the Department of Psychology at the University of Strathclyde. This is titled *The Trials and Tribulations of Changing How Reading is Taught in Schools: Synthetic Phonics and The Educational Backlash* (Johnston & Watson, 2016).

There are many arguments coming from teaching bodies that systematic synthetic phonics de-skills teachers, that ‘one size doesn’t fit all’, that the phonics screening check is unfair on children, that league tables should be scrapped etc. However, there is no research showing better results with the

methods they advocate. The Department for Education is fully committed to implementing in England only methods of teaching that are backed by rigorous scientific research.

The Rose Review in 2006 recommended that initial teacher and in-service training should equip primary school teachers with the key principles of teaching phonics work and relate this to how children learn to read. However, even though Systematic Synthetic Phonics has been mandated in the National Curriculum (DfE, 2014), there is still a lot of whole word teaching going on alongside synthetic phonics teaching. There is a long-held idea by teachers that different children need different ways of learning to read, especially those with special needs, i.e., that they can only learn to read by a sight word approach. Convincing teachers and educationalists that synthetic phonics is simple, quick and more effective than using multiple approaches where sight word tuition undermines the phonics teaching, has proved very difficult. The problem with this 'balanced view' is that when a child meets an unfamiliar word it doesn't know whether to guess from context or sound and blend it. With this type of teaching, a dyslexic child may go for a sight word approach because their visual skills at that point are better than their phonological skills.

19. Can you teach children with dyslexia how to decode and encode using an analytic phonics and mixed methods approach?

The question is whether this approach gets such children to utilise fully the alphabetic basis of the English spelling system. We found in our research in Scotland that higher ability poor readers (i.e., dyslexics) learning to read by the analytic phonics approach showed phonological weaknesses not shown by lower ability children (Johnston and Morrison, 2007). Analytic phonics programmes start with whole words being taught that are only fully analysed phonically later; children who have phonological weaknesses might take to guessing what words are by sight if the teaching of the use of letter sounds all through words is delayed or not thoroughly taught early on. With synthetic phonics teaching, the idea is that when a child sees an unfamiliar word it has a 'have a go' attitude and tries decoding the letter sounds from left to right to see how to pronounce it, in the knowledge that some words will only be partially decodable this way. I have seen a child sound the individual letters of 'laugh' as 'l' 'a' 'u' 'g' 'h' and decided it said 'laugh'! Indeed, I think why this works is that the attempt to sound a word starts to generate a number of possible candidates. When the child gets to the end of a phonically regular word it knows what it is for certain. However, using the phonics in irregular words (even the word 'yacht' contains some phonic information) the child can produce a small subset of possible pronunciations to guide them, when reading in context the two sources of information interact together. The synthetic phonics approach soon generates in the child a store of words that are recognised by sight (and also develops their phonological awareness skills); a study has shown that an unfamiliar word only needs to be decoded 3 to 4 times for this to happen. With an analytic phonics/whole word method, a child with strong visual skills but weak underlying phonological skills may take a whole word approach not well underpinned by phonological information and make very slow progress in learning to read.

Sir Jim Rose conducted a second review, with the aid of an expert panel made up of dyslexia and literacy experts. The review '*Identifying and teaching children and young people with dyslexia and literacy difficulties*' (Rose, 2009) concluded that children with dyslexia needed a teaching approach that prioritised phonological skills, was structured, cumulative and sequential, in short systematic. This is a good description of our approach to synthetic phonics teaching. Based on current research, it is evident that children with a dyslexia diagnosis should receive systematic synthetic phonics teaching programmes until decoding and encoding skills have been mastered. The review found no evidence that an alternative teaching method, based on an analytic phonics/whole language approach, was superior to the systematic teaching of synthetic phonics for children with dyslexia.

20. What makes a literacy programme successful?

A programme should be developed from a sound understanding of scientific reading research. If you add a synthetic phonics teaching component into a whole language literacy programme (e.g., Reading Recovery), you cannot then assume that this programme will produce the same results as an already developed and tested synthetic phonics programme, and there is good reason to think it will not. It is likely that a child with phonological weaknesses will not fully grasp the alphabetic nature of the English spelling system with such a method. The DfE (2010, revised 2023) had to produce the core criteria for Systematic Synthetic Phonics programmes so that schemes using a mix of whole word and phonics teaching could no longer claim to be synthetic phonics programmes. To this day, there is no research showing that programmes with mixed methods produces equivalent or better reading outcomes. Synthetic phonics is not simply sounding and blending, it is a systematic and rapid approach that is used from the start of initial reading tuition, and which continues throughout the first few years of schooling. It is not a single shot inoculation. It enables children to take mastery of their own learning. Phonics is not just the icing on the cake, as claimed by Ellis, 2005; research shows that it is what children need to understand fully the alphabetic nature of our spelling system. We have always stressed that such teaching needs to be one facet of a comprehensive teaching programme, and this was the case in Clackmannanshire. It cannot be assumed that extracting the sounding and blending element of synthetic phonics teaching and grafting it on to a programme with a whole word ethos is an adequate approach to helping children with reading difficulties.

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