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Ethics, education policy and research: the phonics question reconsidered

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This paper argues that direct control of the early years literacy curriculum recently exercised by politicians in England has made the boundaries between research, policy and practice increasingly fragile. It describes how policy came to focus most effort on the use of synthetic phonics programmes in the early years. It examines why the Clackmannanshire phonics intervention became the study most frequently cited to justify government policy and suggests a phonics research agenda that could more usefully inform teaching. It argues that, whilst academics cannot control how their research is eventually used by policy-makers, learned societies can strengthen their ethics policies to set out clearer ground rules for academic researchers working across knowledge domains and with policy-makers. A stronger framework to guide the ethical interpretation of research evidence in complex education investigations would allow more meaningful conversations to take place within and across research communities, and with research users. The paper suggests some features for such a framework.

Introduction

The role of phonics in learning to read and the types of phonics instruction that might be most effective have been robustly debated within the literacy research community for some considerable time (Lewis & Ellis, 2006; Wyse & Goswami, 2008). Over the past two decades the scale of disagreement and consensus within the professional community has shifted towards a general acceptance that systematic phonics instruction has a part to play in promoting early reading as one element in a rich literacy curriculum (Erhi *et al.*, 2001). There is far less agreement over claims that it is the single, or even the most important route to becoming a proficient reader (NELP, 2008; Dombey, 2010; Pearson & Hiebert, 2010). Yet in England the current government recently mandated that systematic synthetic phonics be taught in all state schools and university teacher education programmes as the dominant approach to early reading instruction. In all primary schools such systematic synthetic phonics programmes are to be delivered first and fast as the main strategy for teaching reading. The core criteria that the Department for Education (DfE) use to define the 'key features of an effective, systematic, synthetic phonics programme' (DfE, 2012a, p. 1) include the following:

- ensure children apply phonic knowledge and skills as their first approach to reading and spelling even if a word is not completely phonically regular
- ensure that children are taught high frequency words that do not conform completely to grapheme/phoneme correspondence rules

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- provide fidelity to the teaching framework for the duration of the programme, to ensure that these irregular words are fully learnt
- ensure that as pupils move through the early stages of acquiring phonics, they are invited to practise by reading texts which are entirely decodable for them, so that they experience success and learn to rely on phonemic strategies. (DfE, 2012a, p. 1)

To put this strategy into place schools have been offered matched-funding of up to £3000 to buy government-approved systematic synthetic phonics products, books and training. To check the efficacy of delivery, a statutory 'screening check' for all 6-year-olds has been introduced, with results published online and incorporated into the Ofsted inspection regime (DfE, 2012b). The screening check tests the ability to decode both real words and non-words as a measure of the extent to which pupils have learnt to operate specific phonics rules. The screening check is not a test of reading in its fullest sense, where meaning counts as well as decoding.

The extent to which schools and university-based initial teacher education courses comply with these directions has become part of the accountability regime and school inspections are heavily focused on how phonics is taught. By comparison, little attention is given to teaching children to read with understanding: the training document to support Ofsted inspections of the new early reading curriculum mentions 'phonics' 130 times but 'comprehension' just nine times (Ofsted, 2011). Professional development courses and materials found not to promote the government-mandated approach to phonics will be de-listed so that schools cannot buy their training or materials with the government grant.

University departments are being inspected on similar lines. Ofsted have introduced short-notice, spot-check inspections on university providers. Failure to demonstrate full commitment to teaching systematic synthetic phonics may ultimately result in course funding being withdrawn. Universities have been instructed to spend a minimum of 90 hours teaching the government-mandated approach to phonics and faculties who introduce student teachers to other approaches have received letters from the Department for Education reminding them of government policy. When James Nobel-Rodgers, Executive Director of the Universities' Council for the Education of Teachers (UCET), wrote to protest at this heavy-handed treatment, Susan Gregory, HMI National Director, Education, replied saying:

> The new Teachers' Standards… require primary teachers and trainees to demonstrate a clear understanding of systematic synthetic phonics. This will require Ofsted inspections of primary ITE to evaluate how confidently and competently they teach systematic phonics as well as the quality of training they receive. If this training lacks the rigour required, this will be reflected in judgements inspectors make… We are keen to sharpen the focus on systematic phonics. (Ofsted, 13 April 2012)

There has been surprisingly little public discussion on whether it is appropriate for the government to act in this way. The various accountability measures that have been adopted to ensure the policy's implementation actively curtail the ability of university academics, student teachers and the teaching profession to reflect on the full range of research evidence on the development of reading. They also constrain the freedom of professionals to adjust the delivery of systematic synthetic phonics programmes in response to observations of their effects in practice.

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This paper considers how the policy emphasis on a narrow psychological model of reading came about and the checks and balances that ought to operate when research knowledge created in one domain according to particular traditions and standards of proof, travels out into other arenas. This paper does not seek to re-examine the evidence for or against analytic or synthetic phonics per se (for a good analysis see Wyse & Goswami, 2008). Rather it examines the knowledge claims and research paradigms upon which the English government's models of reading and phonics are based, the hold these have on the curriculum and how the education research community might act to mitigate the effects of single-paradigm knowledge claims that do not recognize the potential limitations to the original research.

What becoming literate involves: what policy could cover but does not

Teaching literacy is a complex process, and phonics instruction has a clear part to play in this. There is an on-going academic debate about the type of phonics instruction that is most effective (see for instance, White, 2005). Systematic reviews have found no clear advantage for either of the two main psychological models of phonics acquisition, analytic or synthetic phonics, although they did find an advantage for systematic teaching of any given approach (NICHD, 2000; Torgerson *et al.*, 2006; NELP, 2008). However, other aspects beyond phonics make literacy learning complex. Ethnographic studies indicate that literacy is not an autonomous skill but a social practice. Its purposes and uses are socially and culturally constructed (Heath, 1983; Street, 1985). What pupils attend to in literacy lessons depends on what they and those around them think literacy is *for* and how it can be used (Moss, 2009). This may explain the evidence from large-scale surveys that socioeconomic status and gender have the biggest impact on how well students read (Mullis *et al.*, 2007; OECD, 2010a). How much students read is also important; PISA 2009 indicates that almost 70% of the gender gap and 30% of the socio-economic gap in reading attainment is associated with disparities in the breadth and depth of reading (OECD, 2010a). If schools change students' levels of engagement with literacy it could mitigate some of the socio-economic and gender effects on attainment. Studies of how to increase student engagement in reading indicate that it requires stronger links between the cognitive, social, cultural and affective aspects of literacy learning, with intrinsically motivating tasks that foster choice, coherence, collaboration and pupils' interest. This includes teaching that prompts pupils to transfer effective reading strategies across tasks and content areas (Guthrie & Wigfield, 2000, p. 404).

There is evidence that the 'ideal' mix of phonics content and pedagogy depends on the learners and their context. Carol Connor and colleagues (Connor *et al.*, 2004, 2007a) suggest that children starting school with a high vocabulary and letter knowledge need a different mix from those starting with low vocabulary/letter knowledge if they are to make best progress. These differences in preparedness to read can be linked to factors associated with social class. Studies that empirically identify and investigate highly effective literacy teachers show that both teacher and school effects trump programme content for impact on children's reading (see Hall, forthcoming for a good review). Highly effective literacy teachers do similar activities to their less-effective colleagues but achieve greater instructional density; they are more responsive

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to what children understand, they 'follow-through' teaching points and seize the 'teachable moment'. They are more knowledgeable about their pupils' lives, contextualise their teaching, frame activities to prompt intrinsic purpose and engagement, and their teaching has more pace, meta-language and challenge (Louden *et al.*, 2005).

Research also shows that effective programmes lose impact when 'scaled-up' for wider implementation (Datnow *et al.*, 2002). Policy researchers such as Coburn (2005, 2006) have found that *how* policy changes are implemented affects their depth, efficacy and sustainability, including their ability to influence teachers' understanding and response (Coburn & Stein, 2010). Reviews of a range of interventions suggest that the programmes that prove most sustainable over the longer term balance fidelity with adaptability, rather than sticking rigidly to the original prescription (Earl *et al.*, 2003; Bransford *et al.*, 2009)

Clearly, the debate on improving reading attainment is not limited to the debate on phonics. Given all this, how is it that phonics, one part of learning to read, and synthetic phonics, one particular view of phonics instruction, have had such a strong and central role in shaping the curriculum in England?

How did phonics become so central: the rise of phonics in policy development in England

The first public indication of a new policy cycle for literacy in England was the Rose Review into Early Reading (Rose, 2006). This was the first review of literacy teaching since the then Labour government had introduced the National Literacy Strategy as its flagship education policy in 1998. The National Literacy Strategy (NLS) model for teaching reading had been based on teaching young readers to use four cueing systems to work out what texts say: phonics; word recognition/graphic knowledge; syntax; meaning/knowledge of context. This model, known within the NLS as the 'Searchlights' model, was not perfect. It drew rather haphazardly on psycholinguistic theoretical models, grounded in systematic observations of children reading in naturalistic contexts and applied in widely documented teaching tools such as 'running records' and 'miscue analysis' (Goodman, 1960; Clay, 2002, 2006). These tools allowed teachers to record and analyse reader behaviours, to intervene and track progress.

Campaign groups such as the Reading Reform Foundation (RRF) argued that this model placed insufficient emphasis on phonics and left too much to chance by allowing teachers to determine the balance and focus given to each of the cueing systems (see for example RRF, 2004). They lobbied for it to be replaced by synthetic phonics programmes, which focused solely on phonics in the early stages of reading and prescribed the exact sequence of sounds and the pace at which they should be taught. Claims for the efficacy of phonics drew on American studies that identified alphabetic knowledge and phonics as predictors of later success in reading (NELP, 2008). It has been suggested that such predictors are not causative in themselves but are proxy measures for a wide range of truly causative variables, including home literacy experiences, orthographic knowledge and language skills (Pearson & Hiebert, 2010).

However, the RRF found political backing from Nick Gibb, then the Shadow Minister for Schools, who used their arguments alongside reports of a successful

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phonics intervention in Clackmannanshire, Scotland, to criticize the NLS and the government's literacy policy. This political debate offered academic psychology researchers, especially those with an interest in synthetic phonics or who disagreed with the psycholinguistic model promoted by the NLS, an opportunity to align political will with their own research field. Moss and Huxford (2007) argued that for a few months in England, as the light was fading from the National Literacy Strategy, phonics lobbyists and political strategists played a crucial role in bringing this alignment about.

In 2004 Nick Gibb used his position on the House of Commons Select Committee on Education to nominate Teaching Children to Read as the topic of enquiry. The Select Committee hosted an invited seminar on early reading, published written evidence collected as a result of this, and heard oral evidence from expert witnesses. Professor Rhona Johnston, a psychologist at the University of Hull, argued strongly for synthetic phonics rather than the analytic phonics approach embodied in the National Literacy Strategy. She explained her study in Clackmannanshire as a 16-week trial that compared different types of phonics teaching. She reported that the synthetic phonics group, given 20 minutes of input per day, made far greater progress than groups on other phonics programmes, and that synthetic phonics had a long-term effect on spelling and on word reading (Education and Skills Committee, 2005a, pp. 77–87).

Morag Stuart, a psychologist at the Institute of Education gave a wider account of the psychology research and a balanced account of the psychology evidence on synthetic phonics. She was clearly frustrated by what she saw as a lack of focus in university teacher education courses and the Teacher Training Agency on the evidence from developmental psychology about learning to read. In her written evidence to the committee, Stuart introduced the 'Simple Model' of reading as a model widely used by cognitive psychologists and theoretically more convincing to them than the NLS Searchlights model (Education and Skills Committee, 2005b). The 'Simple Model' explains distribution patterns in the psychology data on comprehension and decoding and suggests that comprehension and word reading follow separate developmental paths with separate knowledge bases which, by implication, can be taught discretely.

Both Johnston and Stuart told the committee that they felt that the teaching of reading had been ideologically driven and did not take account of evidence-based research. In this, their views chimed with debates in the UK and the US about education research being driven by fads and professional consensus rather than science (Hargreaves, 1997; US Department of Education, 2002, p. 59). In her oral evidence, Stuart argued strongly for the value of research into reading conducted within psychology rather than within education. She counterpoised psychology and education reading research paradigms as offering quite distinct contributions to the beginning teacher, with the former being of more direct relevance:

> As a psychologist, what I believe is that teachers in training ought to be taught the psychology of reading and the psychology of reading development, so that they understand what reading is and how children learn to do it. (Education and Skills Committee, 2005b, p. 26)

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> When she was asked by the Chairman: 'So we should listen to psychologists more than educational researchers?' She replied, 'The research on reading goes on in psychology departments' (Education and Skills Committee, 2005b, Q38–39).
>
> In response to all the evidence presented to them, the Westminster Select Committee Enquiry concluded: 'In view of the evidence from the Clackmannanshire study… we recommend that the Government should undertake an immediate review of the National Literacy Strategy' (Education and Skills Committee, 2005c, p. 23).

In the political climate so created, The Secretary of State established the Rose Review. This adopted the 'Simple Model' of reading as a new conceptual cornerstone for the literacy curriculum and recommended that early reading instruction should focus on systematic synthetic phonics within a rich language curriculum (Rose, 2006). A later review, Rose (2009) looked at the language comprehension side of the Simple Model. Its recommendations were not widely discussed and were criticized by Nick Gibb for appearing to propose 'a contraction in the amount of time spent on teaching literacy and communication' (DfE, 2009).

In 2010, the Simple Model became the cornerstone for the new coalition government's literacy curriculum. As Minister of State for Schools, Nick Gibb focused political attention and resources heavily on the phonics part of the model, so that the core of the Key Stage 1 English curriculum is now predominantly defined as word level work derived from following synthetic phonics programmes (DfE, 2012c). There is much less advice on what else makes for a rich literacy curriculum. Some of the academics who originally embraced the emphasis on phonics are now openly critical of the curriculum development they once appeared to support. Others have fallen silent. In their place, single-issue knowledge brokers, often well-connected private consultants, are selling the necessary commercial schemes into the school system to meet these limited objectives (Benn, 2011, p. 12; Mills, 2011).

Shifting knowledge domains: from psychology to education by way of Clackmannanshire

Nick Gibb clearly believed that synthetic phonics would deliver serious improvements to literacy attainment. He also clearly believed that the Clackmannanshire study provides robust academic evidence for his emphasis on phonics within current literacy policy: it was the academic research study that he most consistently cited as evidence for the government's investment in synthetic phonics. In September 2011 he said:

> … longitudinal studies such as the Clackmannanshire study by Rhona Johnston and Joyce Watson, showed that early systematic synthetic phonics was the most successful method of teaching children to read. Indeed the Clackmannanshire study of 300 pupils over seven years showed that at the end of that seven-year period systematic synthetic phonics had given those children an average word reading age of 14 by the time they were 11. (Gibb, 2011)

In July 2012, Nick Gibb cited the study in a written paper presented to the discussion website 'mumsnet':

> The Clackmannanshire seven-year longitudinal study showed how children taught to read using systematic synthetic phonics in the first ten weeks of school had, on average, a word reading age of 14 and a half [sic[1]] by the age of 11. (Gibb, 2012)

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> How did a single study become so central a reference point in debate about the role of phonics in England, especially when in Scotland the response of the Schools' Inspectorate to the findings from the Clackmannanshire study was distinctly muted. They commented 'Whilst this programme had made a strong impact on pupils' ability to sound out, spell and recognise words, further work was required to link these skills to other aspects of reading such as comprehension' (HMIE, 2006, p. 4).

Disentangling the various phases to what has become known as the Clackmannanshire study is not straightforward. Johnston and her colleague Watson first conducted a school-based, RCT-design study in Clackmannanshire to investigate 'whether synthetic phonics was more effective than analytic phonics merely because letter sounds were taught at an accelerated pace' (Johnston & Watson, 2004, p. 343). Their second study was designed to test different psychology models of phoneme processing by contrasting three approaches to teaching decoding, with teachers as the programme deliverers. The study involved almost 300 pupils in 13 Primary 1 classes in eight Clackmannanshire schools, with groups of classes exposed to different phonics treatments. Teachers delivered programmes based on either: (a) accelerated synthetic phonics, (b) analytic phonics, or (c) analytic phonics, plus phonological awareness training. Post intervention tests administered by the researchers showed that the group taught accelerated synthetic phonics 'read words around 7 months ahead of the other two groups and were 8 to 9 months ahead in spelling' (Johnston & Watson, 2005, p. 8). These results led to all the teachers being trained to deliver the accelerated synthetic phonics programme and all class groups were transferred onto this before the end of their first year of school. These findings were reported in Watson and Johnston (1998). This study was funded by Scottish Executive Education Department as part of a national Early Intervention initiative to establish multi-platform interventions in disadvantaged schools. Some of the Clackmannan phonics schools took part in parallel interventions such as the introduction of home–school link teachers, library rejuvenation projects and homework clubs (Ellis, 2007). The researchers used a further small-scale grant from SEED to track this cohort throughout their primary careers. This was the study from which they assessed long-term impacts and Nick Gibb's claims derived.

Doubts have been raised about the robustness of these study designs and analyses (Wyse & Styles, 2007; Wyse & Goswami, 2008), and the extent to which it is possible to distinguish the impact of the intervention from the other programmes running alongside it (Ellis, 2007). The teacher intervention and the longitudinal study were excluded from the systematic literature review of phonics conducted by Torgerson *et al.* (2006). Because details of the longitudinal study and its findings came into the public domain outside of the process of peer-review via the report the researchers wrote for the Scottish Executive (Johnston & Watson, 2005), they have been overlooked in much of the discussion on the efficacy of synthetic phonics within the academic community. However, given its political significance, we now submit the claims made in the longitudinal study to scrutiny.

Longitudinal studies of the impact of phonics training are relatively rare, and the Clackmannan study followed the original intervention cohort from aged 5-years-old through to 12-years-old, when the pupils transferred to secondary schools. The cohort was re-tested towards the end of their second year on standardised tests of

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single word reading, spelling and reading comprehension. No significant differences in reading were found between the three treatment groups, although the group exposed first to synthetic phonics achieved better results in the spelling test. The children's mean scores on reading and spelling tests were described as higher than their chronological age. For the remainder of the longitudinal study (Primary 2–7) the relationship between the children's performance on word reading, reading comprehension and spelling tests and their chronological age becomes the main measure by which the efficacy of the initial intervention is judged. The children were tested annually. By the end of their seventh year in primary school, the pupils were reported to be an average of three years and six months ahead of their chronological age in decoding words; one year and nine months ahead in spelling and three-and-a-half months ahead in comprehension (Johnston & Watson, 2005). These results were quoted by Nick Gibb and were widely repeated in both the UK media and in academic policy reviews for literacy (for example, Australian Government DEST, 2005, p. 35). They are central to the case for the mandatory introduction of systematic synthetic phonics programmes to English schools.

In their presentation of the longitudinal data, the researchers report the children's performance in terms of the mean average scores for the cohort as a whole and by gender (Johnston & Watson, 2005). Any advantages over chronological age in the mean scores achieved for word reading, spelling and reading comprehension are presented as evidence for the impact of the initial intervention in Primary 1. Yet the research design does not offer strong support for this assumption. It did not isolate the impact of the treatments from the range of other factors that might also affect children's reading development over their primary career (teacher effectiveness; access to resources; other programmes running in these schools, or remedial help offered subsequently). This would require control groups in each of the classes, exposed to the same conditions apart from the intervention. Nor do they compare the performance of each of the original treatment groups, the children in different classes, or in different schools.

In a part of the report that has been generally overlooked (Johnston & Watson, 2005, Chapter 6) the researchers did look for impacts on reading attainment of various contextual factors such as deprivation levels, parents' educational attainment, resources in the home and pupils' attitude to reading, using a questionnaire administered to a subset of the cohort (n = 224) in Primary 7. Many of those indicators generally associated with higher performance in reading—attitudes towards reading, greater resource levels for reading in the home, parents' educational attainment—were found to impact on the children's achievement, but no attempt was made elsewhere in the analysis to control for these effects or look for interaction with the effects of the initial treatment. Moreover, a sudden leap in mean word reading and mean spelling ages above chronological age, which happened between Year 6 and Year 7, is not accounted for in the analysis (Johnston & Watson, 2005, pp. 24, 26, Figures 4.1 and 4.2). No attempt is made to elucidate any causal mechanism by which an intervention focused on decoding skills some six years earlier might have had this delayed impact. There is no similar increase in reading comprehension scores, which stayed far closer to chronological age throughout, and where any small advantage is reported as diminishing from Primary 2 to 7 (Johnston & Watson, 2005, pp. 26–27, Figure

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4.3). Taken in the round, the way the data are presented suggest that the researchers have ignored the counter-factual—what else besides the initial treatment might have led to the patterns they record—in the pursuit of their argument about the efficacy of synthetic phonics. The weakness of the research design, including the way the statistical data were analyzed and reported, suggest it would be unwise to draw any clear conclusions for pedagogy or policy from this single study.

Governance arrangements in Scotland mean that national test results for the intervention cohort would be known only to individual schools and the local authority that monitors performance against agreed benchmark levels and targets. However, the results for all P7 classes between 2002 and 2004 were obtained and published under the Freedom of Information act by a Scottish newspaper, including the results of the phonics intervention cohort which graduated from P7 in 2003 (Fracassini *et al.*, 2005). This allows the pupils' performance on the Scottish national tests to be set alongside the standardised test data reported in the longitudinal study. Table 1 details the national test results for the pupils involved in the trial, reported by school, and those for the year groups that preceded and followed the intervention cohort.

These national test results do not suggest that *reading* attainment (rather than decoding) in the classes exposed to synthetic phonics was significantly ahead of age-related expectations. In School B, serving a community approaching the Scottish average of 21% FSM entitlement, 84% met the minimum expectation, roughly the Scottish average at the time. In School A, serving an advantaged middle-class community, only 70% of pupils who received the synthetic phonics intervention met the national minimum level for reading. In small Schools C, D and G, all operating with higher levels of FSM entitlements (56%, 76% and 33% respectively) results are better, but not outstanding in absolute terms, with 77%, 73% and 91% of pupils attaining or exceeding the minimum expectation. The small numbers of pupils involved make drawing robust conclusions from these data difficult. Overall, however, the variation in outcomes argues against a clear effect that distinguishes these school results from what one would expect to occur by chance.

These results show that different lenses produce quite different pictures of reading attainment. Even if one accepts that the synthetic phonics programme yielded

Table 1. Reading attainment in P7 (% pupils Level D or above)

	Roll	% Free School Meal Entitlement in 2003/04	Year: 2002/03	Year: 2003/04 (intervention cohort)	Year: 2004/05
A	488	14	69	70	82
B	409	22	80	84	79
C	229	56	47	78	n/a
D	155	76	47	73	66
E	146	41	57	44	72
F	114	45	44	20	21
G	63	33	70	91	75
H	277	17	87	77	77

Notes: National average for P7 pupils at Level D or above in 2003/04 = 74.5%; national average for Free School Meal entitlement in 2003/04 = 21%.

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a higher skill-level in decoding, there is little to suggest that this translates into successful reading. For teachers, and one would have thought education policy-makers, a convincing success-measure for a *curriculum* intervention must be based on the reading demands of real life rather than on scores from tests devised to measure highly specific sub-skills. In championing the Clackmannanshire study Nick Gibb overlooked both its methodological flaws and its inappropriate application. The current Schools' Minister, David Laws, may take a more balanced and evidence-based view. However, the real issue to be explored is not just that politicians ignore evidence but that different sorts of evidence deserve attention: politicians need to be clearly directed to the nature of the questions that educators (rather than, for example, psychology researchers) need research to address.

Sorting out the evidence on reading: lessons from education for phonics research

The history of the phonics curriculum in England shows how easily a theoretical debate about models of phonics processing in psychology can distort debates on effective classroom practice as the findings migrate from psychology into education via policy. The experimental measures that were used in Clackmannanshire remain those of a psychology investigation: phoneme manipulation in words and non-words, de-contextualised word reading and a cloze-procedure comprehension test completed by selecting words from a list. The methodology is limited by the disciplinary boundaries. This was not an implementation study of a teaching method. Beyond the initial treatment programme, the study reports no information about the actual time teachers spent on phonics tuition; the time spent on other reading activities, the extra time spent on additional phonics instruction for struggling pupils or the curricular areas they missed whilst receiving this additional support. It does not report details of the context of implementation, the other programmes operating in the schools, the ongoing staff support or the resources teachers had available to construct a rich literacy curriculum. It also generated no implementation advice by analysing the specific school, pupil, teacher or classroom factors in each context. These kinds of questions are central to educational studies; they are not conceived of as central within this kind of psychology research which focuses far more attention on the sub-skill processing that takes place at the level of the individual pupil, rather than within the social space of the classroom. Despite being presented in the media and by Nick Gibb as a highly effective intervention for *teaching reading*, Clackmannanshire was, at heart, a psychology investigation into two competing theoretical models of processing phonemes. As such its capacity to generate insights that could deliver at scale the improvements in attainment that politicians want, remains unproven.

Studies that rest on such narrow data sets cannot be generalised to curriculum or policy development because they provide little evidence of their impact on the children's ability to read continuous, meaningful texts. In the US, where there is a longer political history of teachers implementing phonics-based programmes, the unreliability of tests of word reading and sound-manipulation skills as indicators of wider reading ability is beginning to emerge through continuing evaluation of the evidence-base. For instance, the US Department of Education's Early Childhood Longitudinal

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Study (Denton & West, 2002), evaluated the progress of a nationally representative sample of children from kindergarten to fifth grade on a number of reading measures. It found that although systematic teaching could produce high skill levels in decoding and alphabetic knowledge, it did not result in correspondingly high reading attainment scores in children who did not begin school with a good letter knowledge. In reporting this study, Pearson and Hiebert (2010) argue that it is wrong to assume that a discrete facility in one isolated skill such as sound manipulation will automatically confer an advantage in an overall task that is very much more complex and involves orchestrating many different kinds of information.

All of this argues the need for more research bridging the divide between the fields of psychology and education. A more useful research agenda addressing the place for phonics in teaching literacy would generate a different body of knowledge: about how phonics instruction relates to other aspects of learning to read; the optimum balance between different forms of reading instruction and how they might change over time; their efficacy for readers (and teachers) with different experience and prior knowledge; and the evidence of what constitutes effective phonics teaching in real classroom settings. This would open up rather than close down the capacity of the research community to reflect on practice.

Developing a new agenda for phonics research

Work that already addresses some of these issues includes studies that throw light on the mechanisms and processes that affect how children understand and benefit from different forms of phonics instruction in classroom settings. For instance, Thompson *et al.* (2008) looked at children who were below average for word-reading and compared three matched samples of readers given either high- or low-amounts of phonics tuition, or incidental tuition whilst reading storybooks. They found no significant differences in comprehension. On average, both phonics groups were better at reading non-words, but only the high-phonics-tuition group used phonics to decode when reading continuous text. Individual pupil scores for word reading accuracy overlapped considerably between groups, a puzzling result considering that the storybook group received only incidental phonics tuition. However, having spent more of the lesson-time reading, these storybook children were more fluent, faster readers (reading on average 46% more words than the high-phonics-tuition group and 20% more than the moderate-phonics group in any set unit of time). The phonics groups were slower, less fluent readers because they spent less time in lessons practicing continuous reading (because they were learning phonics), and the high-phonics group were slowest, getting least time for fluency tuition and practice. The researchers suggest that the fluency of the storybook children had a multiplier effect: they read faster, encountered more unfamiliar words in a set reading period, and so got more practiced at working them out. The researchers suggest that the additional practice effects compensated for the lack of explicit phonics tuition and explain the overlapping word-reading scores of the three groups.

Experimental research that focuses on tightly delineated programmes ignores the variation in what children know and what can be learnt in real classroom settings. To understand what works for whom, Carol Connor and colleagues (2007a, b)

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considered the interactions between children's literacy knowledge on starting school, the teaching content and pedagogies provided, and progress in reading. Rather than arguing about the teaching programme content, their study used whatever materials the schools had but focused on using research data to determine the mix of content and pedagogy over the school year that worked best for readers with different literacy and language experience. A series of cluster-randomized field trials established that children starting school with good letter knowledge, wide literacy experiences and extensive vocabularies made best progress with fewer teacher-directed phonics-focused lessons and more meaning-focused and self-directed activities in their first year but more complex phonics/word-focused direct instruction early in Year 2. Those starting school with poor letter knowledge and poor vocabulary made best progress with a high initial dose of teacher-directed phonics lessons and more meaning-focused, child-directed activities as the year progressed.

More research is needed on what effective phonics teachers actually do in interaction with their pupils. Wyse (2010) suggests that how phonics knowledge is presented and contextualised in conversations between pupils and teachers may make a significant difference to how children use phonics in their reading. Fine theoretical distinctions are quickly lost in the classroom where a responsive teacher spontaneously elaborates on children's conversational observations. A teacher slips from synthetic to analytic teaching as soon as he/she makes a sensible response to a child's observation that 'some words rhyme but don't sound like they are spelled' or that 'some words *should* rhyme but don't' (described as the 'Gove question' in the UKLA fact-cards, which ask 'Does Gove' rhyme with 'move' or 'love'? (UKLA & Dombey, 2010).

The kind of pressures the government now exerts in England on schools, teachers and university teacher educators to adopt only one way of teaching reading, as if it must and will answer all the difficulties their pupils face, is at best naive. At worst it is destructive of forms of professionalism that accept responsibility for reflecting on and adjusting professional practice in the light of research evidence and practitioner experience. The terms in which the government has mandated the introduction of systematic synthetic phonics programmes demonstrates a lack of interest in the body of knowledge built up within other areas of education research that pay far more attention to policy implementation, and what is required to succeed in diverse classroom settings, for children with very different needs.

The politics of ethical practice in research: things we should remember

Politics and research evidence remain awkward bedfellows. This is particularly so when research does not support the direction in which politicians and policy-makers want to move. It is not entirely clear why Nick Gibb committed so strongly to synthetic phonics as a teaching method for early reading when he did, except that it offered an easily understood message and played to his political advantage at a particular moment in the policy cycle. With the National Literacy Strategy (NLS) faltering in its efforts to improve reading in line with politicians' and policy-makers' expectations, championing synthetic phonics represented an effective way of undermining the then government's credibility in delivering on its reforms (Moss, 2009). Gibb exploited this opportunity when by chance he was allotted the rights to nominate the

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topic of enquiry on the Parliamentary Select Committee on Education. By choosing the teaching of reading he was able to use the evidence presented to the Committee to further undermine political support for the NLS. Politics is about calculating risks and seizing advantage in this way. But research has wider responsibilities: to the discipline which forms it and to the contexts of practice it can help re-shape.

As politicians in England take ever more direct control over the direction of education reform, the boundaries between research, policy and practice are becoming increasingly fragile. Academic researchers are being invited to play a number of roles in the new policy landscape: sparring partners, agenda setters, facilitators, technical advisors, expert witnesses or creative thinkers providing substantive, context-specific, advice (Ball & Exley, 2010; Mills, 2011). Each role entails different duties, responsibilities and risks. Pollitt (2006) argues these constitute an ill-defined 'third world' for unsuspecting academics, with vague and under-explored rules of engagement. Given a political climate that increasingly brings researchers and politicians into relationship over issues in practice, researchers need to be alert to the dangers as well as the benefits of such alliances. A renewed focus on the scope and nature of the ethics guidance they are offered could help researchers better negotiate this new landscape. The ethical issues go beyond the integrity of research methods or the fidelity of research reports. They extend to questions of implementation and to questions of 'true for whom and in what circumstances'. Academics obviously cannot control how research is eventually used by policy-makers, but ethics policies can establish the norms and expectations that allow meaningful conversations to take place whenever academics work across knowledge fields with policy-makers, or with the media, educators, education managers and the wider public. Suggestions that a 'Professional Royal College' be appointed to scrutinize research in the light of policy objectives and pragmatic constraints (Coles, 2012) further underline the need for enhanced ethics guidance.

Some communities of practice have been particularly minded to develop ethics policies that can protect researchers from the more toxic blends of economic, political and academic interests. The ethics framework for the Medical Research Council (MRC, 2000, 2008), for instance, recognizes that interventions crossing different knowledge domains are often complex and present not only design and delivery problems but also challenges in evaluating, applying and generalising from the findings of specific research studies and paradigms. Their ethics framework advises that several different methodologies are likely to be necessary to understand such complex situations and to locate the different kinds of evidence required that would enable reasonable conclusions to be drawn.

To get from an experimental stage to a solution that works in practice, the original MRC model (MRC (Medical Research Council), 2000, 2008) detailed five phases of investigation: (1) a theoretical phase; (2) a modelling phase; (3) a development, exploratory or adaptive trial(s) phase; (4) an RCT; and (5) a long-term evaluation phase focusing on the effectiveness of the intervention in real-life settings, including understanding the processes involved, how they can be optimized and assessing and improving their cost- or time-effectiveness where possible. This model was later modified (MRC, 2008) to make the cycle to research less linear, provide better support for the development, implementation and evaluation phases, make it less dependent on clinical models and more applicable to highly complex contexts where several

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programmes may interact. In the modified framework it is very clear that researchers are expected to distinguish between impacts they have established in their research and what can properly be extrapolated as evidence of the practical effectiveness of their research in everyday interaction. They are asked to consider very carefully:

> … whether the intervention works in everyday practice—in which case it is important to understand the whole range of effects, how they vary among recipients of the intervention, between sites, over time, etc, and the causes of that variation. (MRC, 2008, p. 7)

This provides an unambiguous steer for researchers and research-users to weigh the nature and breadth of the evidence they have in front of them alongside the knowledge generated through implementation, so they may better judge how it might be useful, to whom, and in what circumstances. In the literacy debates reported in this paper, the MRC guidelines would have shone a strong light on the nature of the evidence presented. They would also have addressed head-on the epistemological polarity in the view of reading research presented to the Select Committee and encouraged researchers who found themselves working in that context, to consider how many different areas of research are involved in understanding literacy learning and teaching. An ethics framework that acknowledged the complexity of intervening successfully in education practice should prompt differing research traditions to engage more fruitfully with each other. It should also prompt researchers to recognise the potential problems of interacting with powerful policy agendas driven by interests that are different to their own, and to act more cautiously.

In the field of education, ethics guidance about topics of investigation that do not wholly fit within the parameters of one particular discipline should be strengthened, as well as guidance about working with partners, policy-makers, media and other public groups outside the researchers' own knowledge domain. As they currently stand, the ethics policies of the British Psychological Society (BPS) and The British Educational Research Association (BERA) do not sufficiently address these issues. The BPS framework focuses on ensuring respect, competence, responsibility and integrity when psychologists work with each other or with the public in professional clinical practice or experimental research projects. In general terms these guidelines do identify that issues relating to the unequal distribution of power and control of knowledge can be problematic, 'where the psychologist owes an allegiance to several different stakeholders' and 'where excessive or misleading claims are made or where inadequate safeguards and monitoring exist for new areas of work'. It suggests that psychologists should: 'Respect the knowledge, insight, experience and expertise of clients, relevant third parties, and members of the general public' and 'Make every effort to correct any negative outcomes and remain engaged in the process'. It also offers advice for very specific situations (it has a separate document for example on 'Testifying in a Legal Court-case'), a webpage for individual queries (which exemplifies issues) and links to other organisations' advice for particular work contexts (e.g., *British Health Professions Council*; *British Medical Association*), but it does not indicate policy advice as an area. It does not link to BERA or other educational research associations.

The British Educational Research Association (BERA) guidelines acknowledge that research can be misinterpreted or misquoted and that researchers have the right to 'dissociate themselves publicly from accounts of the research that they conducted,

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the subsequent presentation of which they consider misleading or unduly selective' (BERA Council, 2011 p. 9).

However, the section dealing with the ethical issues of publicising, advising, or applying research findings is brief, raising just these two points:

> Researchers have a responsibility to seek to make public the results of their research for the benefit of educational professionals, policy-makers and a wider public understanding of educational policy and practice, subject only to the provisos indicated in previous paragraphs.

and:

> Educational researchers must endeavour to communicate their findings, and the practical significance of their research, in a clear, straightforward fashion and in language judged appropriate to the intended audience. (BERA Council, 2011, p. 10)

Most of the BERA ethics guidance is concerned to protect members of the public and especially children who may act as research respondents over the course of an investigation. Much less is said about the ethical questions involved in dealing with powerful stakeholders, or in contexts where disciplinary conflict may arise. Neither the BPS nor the BERA ethics guidelines give a strong steer to the particular problems raised when researchers work closely with policy-makers.

Perhaps because of the more long-standing political pressures on research in the USA, the American Education Research Association (AERA) provides slightly more detailed guidance about using educational research outwith the research community (AERA, 2011a, b). Like BERA and the BPS, AERA's policy is framed by the overarching values of public trust, respect and honesty and outlines how these relate to specific aspects of researchers' work. Its ethics of 'social responsibility' locate research in the widest possible context. However, the guidelines also identify potential problems from the commercial and economic exploitation of research advice. AERA advises researchers to think carefully when providing consultancy or publicizing their research beyond the research community:

> When education researchers provide professional advice, comment, or testimony to the public, the media, government, or other institutions, they [should] take reasonable precautions to ensure that (1) the statements are based on appropriate research, literature, and practice; and (2) the statements are otherwise consistent with the Code of Ethics. … In working with the press, radio, television, online media or other communications media or in advertising in the media, education researchers [should be] cognizant of potential conflicts of interest or appearances of such conflicts… and… adhere to the highest standards of professional honesty. (AERA, 2011a, p. 149)

The guidance more explicitly acknowledges potential ethical problems when academics are asked for their advice, recognising that those seeking that advice may have their own agendas, and that their quest for knowledge may not be altruistic or benign. This probably reflects their longer experience of the commodification of education research generally and of a range of state-sponsored interventions that have raised the political stakes for politicians and lobbyists and the economic stakes for publishers and consultants.

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In comparing the UK to the US, Hall (2007) and Mills (2011) note that UK education increasingly presents significant political and business opportunities for interested parties. Whereas in the past only reading researchers wanted to talk about the research on reading, now so do a whole range of players, many of whom may be seeking economic or political advantage. Hall highlights ethics defects in the Committee System of Enquiry at Westminster where, unlike the USA, those giving evidence are not required to declare any financial interest they might have in a particular form of outcome. Robins (2010) documents how American and UK lobbyists and commercial publishers strategically court not only those with political influence on literacy policy or curriculum content but academic researchers whose work might be of future benefit to them. In doing so, they introduce academic researchers to new and often novel networks of power and influence. These complex networks, forged between the publishers, academic researchers, lobbyists and those with political and policy influence, blend economic, academic, and political influence in new ways (Ball, 2012).

British literacy researchers from whatever paradigm find themselves in an unfamiliar, and increasingly tangled, political, commercial and legal landscape. This paper has illustrated some of the ethical issues that arise when academic researchers advise policy-makers on complex topics. Classrooms are complex social settings where research applications should be predicated on doing least harm. We have tried to identify some of the things that went wrong in developing the latest phase in England's literacy policy, and have suggested a new research agenda for phonics and reading instruction that calls on multiple research perspectives.

The research community ought to be genuinely shocked about the restrictions government policy now sets on the freedom of university academics in England to engage critically with literacy research and to enable teachers and student teachers to do this. We need to take seriously our own responsibilities in helping to put this right. A stronger ethics policy might help to define and defend the trust that the public should have in research. Widening the scope of the ethics guidance offered to researchers about what constitutes convincing and ethical use of evidence in complex education investigations is a necessary and urgent task. The research community needs to act fast.

NOTE

[1] His account of the reading age obtained by the Clackmannan cohort varies between these two statements.

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